V-series M4A3000E

ASUS PC (Desktop Barebone)

User's Manual

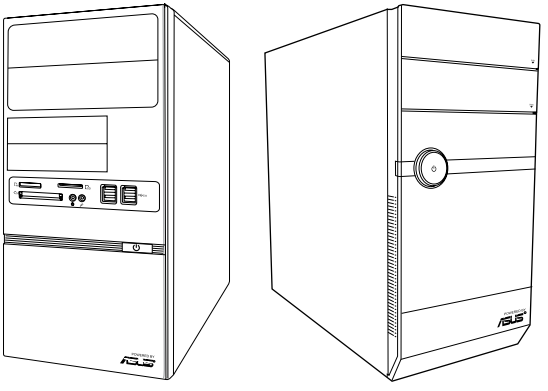

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Table of contents

Notices ..... **vi**
Safety information ..... **vii**
About this guide ..... **viii**
System package contents ..... **x**

Chapter 1: System introduction

1.1 Welcome! **1-2**
1.2 Front panel **1-2**
1.2.1 V6-M4A3000E front panel 1-2
1.2.2 V7-M4A3000E front panel 1-3
1.3 Rear panel **1-5**
1.4 Internal components **1-8**
1.5 Qualified Vendors Lists (QVL) **1-9**

Chapter 2: Starting up

2.1 Installing an operating system **2-2**
2.2 Powering up **2-2**
2.3 Support DVD information **2-2**
2.3.1 Running the support DVD 2-3
2.3.2 Utilities menu 2-4
2.3.3 Make Disk menu 2-5
2.3.4 Manual menu 2-6
2.3.5 ASUS Contact information 2-7
2.3.6 Other information 2-8
2.4 Software information **2-10**
2.4.1 ASUS AI Manager 2-10
2.4.2 ASUS Express Gate 2-16

Chapter 3: Motherboard info

3.1 Introduction **3-2**
3.2 Motherboard layout **3-2**
3.3 Jumpers **3-3**
3.4 Connectors **3-5**

Table of contents

Chapter 4: BIOS setup

4.1 Managing and updating your BIOS 4-2

4.1.1 ASUS Update utility 4-2

4.1.2 ASUS EZ Flash 2 utility 4-5

4.1.3 ASUS CrashFree BIOS 3 utility 4-6

4.2 BIOS setup program 4-7

4.2.1 BIOS menu screen 4-8

4.2.2 Menu bar 4-8

4.2.3 Navigation keys 4-8

4.2.4 Menu items 4-9

4.2.5 Sub-menu items 4-9

4.2.6 Configuration fields 4-9

4.2.7 Pop-up window 4-9

4.2.8 Scroll bar 4-9

4.2.9 General help 4-9

4.3 Main menu 4-10

4.3.1 System Time 4-10

4.3.2 System Date 4-10

4.3.3 Primary IDE Master/Slave, SATA1~6 4-11

4.3.4 SATA Configuration 4-12

4.3.5 System Information 4-13

4.4 Advanced menu 4-14

4.4.1 CPU Configuration 4-14

4.4.2 Chipset 4-15

4.4.3 Onboard Devices Configuration 4-18

4.4.4 PCI PnP 4-19

4.4.5 USB Configuration 4-20

4.5 Power menu 4-21

4.5.1 Suspend Mode 4-21

4.5.2 ACPI 2.0 Support 4-21

4.5.3 ACPI APIC Support 4-21

4.5.4 APM Configuration 4-22

4.5.5 Hardware Monitor 4-23

Table of contents

4.6 Boot menu 4-24

4.6.1 Boot Device Priority 4-24

4.6.2 Boot Settings Configuration 4-25

4.6.3 Security 4-26

4.7 Tools menu 4-28

4.7.1 ASUS EZ Flash 2 4-28

4.7.2 Express Gate 4-29

4.7.3 AI NET 2 4-29

4.8 Exit menu 4-30

Notices

Federal Communications Commission Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING! The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This class B digital apparatus complies with Canadian ICES-003.

REACH

Complying with the REACH (Registration, Evaluation, Authorisation, and Restriction of Chemicals) regulatory framework, we published the chemical substances in our products at ASUS REACH website at http://green.asus.com/english/REACH.htm.

Safety information

Electrical safety

- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system.
- When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.

Operation safety

- Before installing devices into the system, carefully read all the documentation that came with the package.
- Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet. Place the product on a stable surface.
- If you encounter technical problems with the product, contact a qualified service technician or your retailer.
- We recommend that you use this product in environments with an ambient temperature below 35ºC.

Lithium-Ion Battery Warning

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

VORSICHT: Explosionsgetahr bei unsachgemäßen Austausch der Batterie. Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ähnljchen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

LASER PRODUCT WARNING

CLASS 1 LASER PRODUCT

DO NOT throw the Barebone system's components in municipal waste. This product has been designed to enable proper reuse of parts and recycling. This symbol of the crossed out wheeled bin indicates that the product (electrical and electronic equipment) should not be placed in municipal waste. Check local regulations for disposal of electronic products.

DO NOT throw the mercury-containing button cell battery in municipal waste. This symbol of the crossed out wheeled bin indicates that the battery should not be placed in municipal waste.

About this guide

Audience

This guide provides general information and installation instructions about the ASUS Vintage V-series M4A3000E barebone system. This guide is intended for experienced users and integrators with hardware knowledge of personal computers.

How this guide is organized

This guide contains the following parts:

1. **Chapter 1: System introduction**

   This chapter gives a general description of the ASUS V-series M4A3000E. The chapter lists the system features, including introduction on the front and rear panel, and internal components.

2. **Chapter 2: Starting up**

   This chapter helps you power up the system and install drivers and utilities from the support DVD.

3. **Chapter 3: Motherboard info**

   This chapter gives information about the motherboard that comes with the system. This chapter includes the motherboard layout, jumper settings, and connector locations.

4. **Chapter 4: BIOS setup**

   This chapter tells how to change system settings through the BIOS Setup menus and describes the BIOS parameters.

Conventions used in this guide

WARNING: Information to prevent injury to yourself when trying to complete a task.

CAUTION: Information to prevent damage to the components when trying to complete a task.

IMPORTANT: Instructions that you MUST follow to complete a task.

NOTE: Tips and additional information to aid in completing a task.

Where to find more information

Refer to the following sources for additional information and for product and software updates.

1. **ASUS Websites**

   The ASUS websites worldwide provide updated information on ASUS hardware and software products. Refer to the ASUS contact information.

2. **Optional Documentation**

   Your product package may include optional documentation, such as warranty flyers, that may have been added by your dealer. These documents are not part of the standard package.

System package contents

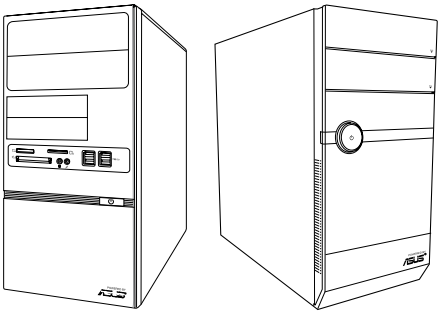
Check your V-series M4A3000E system package for the following items.

If any of the items is damaged or missing, contact your retailer immediately.

Item description	
1.	ASUS V-series M4A3000E barebone system with
	• ASUS motherboatd
	• Power supply unit
	• ASUS chassis
2.	Cable
	• AC power cable
3.	Support DVD
4.	Quick Installation Guide
5.	Telecom Adapter Card (Optional)

Chapter 1

This chapter gives a general description of the ASUS V-series M4A3000E. The chapter lists the system features including introduction on the front and rear panel, and internal components.



System introduction

1.1 Welcome!

Thank you for choosing the ASUS V-series M4A3000E!

The ASUS V-series M4A3000E is an all-in-one barebone system with a versatile home entertainment feature.

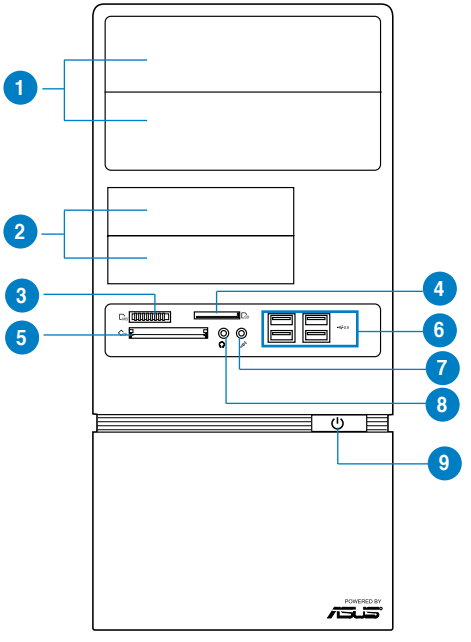
The system comes in a stylish casing and powered by the ASUS motherboard that supports the AMD® AM3 socket for AMD® Phenom™ II / Athlon™ II / Sempron™ 100 series processors.

The system supports up to 8 GB of system memory using DDR3-1800(O.C.)/ 1600(O.C.)/1333/1066MHz DIMMs. High-resolution graphics via integrated graphics controller or PCI Express x16 slot, Serial ATA, USB 2.0, and 8-channel audio feature the system and take you ahead in the world of power computing.

1.2 Front panel

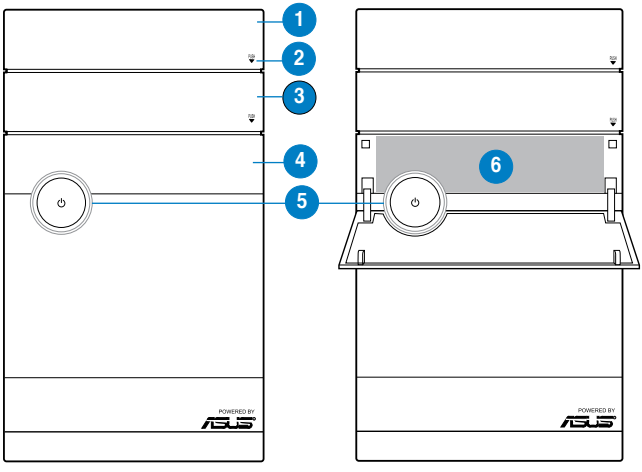
The front panel includes the optical drive bays, power button, and several I/O ports are located at the front panel.

1.2.1 V6-M4A3000E front panel



1. **Two empty 5.25-inch drive bays.** These bays are for 5.25-inch IDE/SATA optical drives.
2. **Two empty 3.5-inch drive bays.** These bays are for 3.5-inch hard disk drives.
3. **MemoryStick® / Memory Stick Pro™ card slot**
4. **Secure Digital™/ Multimedia Card slot**
5. **CompactFlash® / Microdrive™ card slot**
6. **USB 2.0 ports.** These Universal Serial Bus 2.0 (USB 2.0) ports are available for connecting USB 2.0 devices such as a mouse, printer, scanner, camera, PDA, and others.
7. **Microphone port.** This Mic (pink) port connects a microphone.
8. **Headphone port.** This Line In (lime) port connects a headphone with a stereo mini-plug.
9. **Power button.** Press this button to turn the system on.

1.2.2 V7-M4A3000E front panel

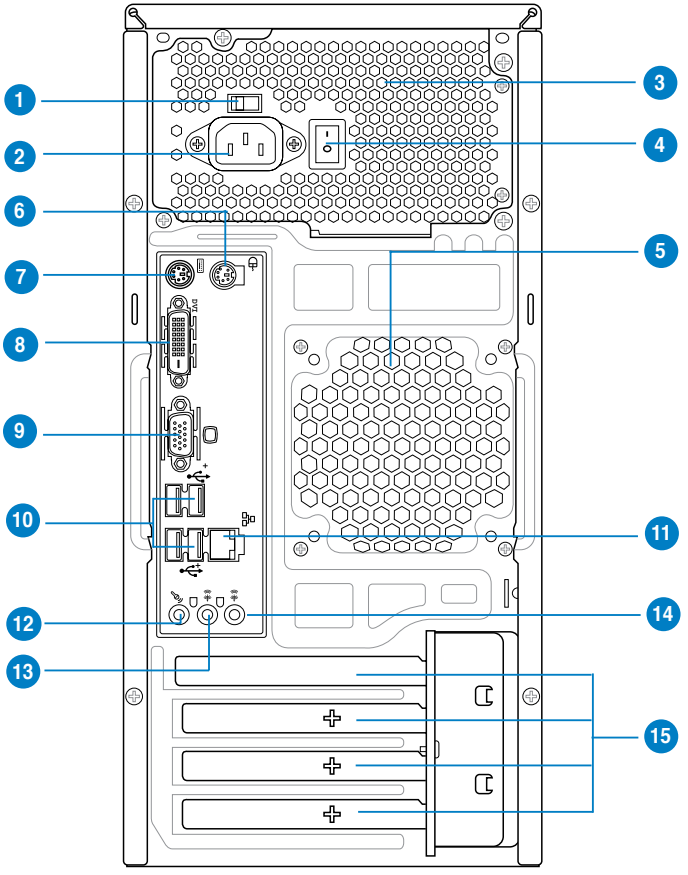


1. **Optical disk drive bay (empty).** You may install an additional optical disk drive in this bay.
2. **Optical disk drive eject button.** Press this button to eject the optical disk drive tray.
3. **Optical disk drive bay (empty).** You may install an additional optical disk drive in this bay.
4. **Front I/O ports cover.**
5. **Power button.** Press this button to turn the system on.
6. **MemoryStick® / Memory Stick Pro™ card slot, Secure Digital™/ Multimedia Card slot, CompactFlash® / Microdrive™ card slot, USB 2.0 ports, Microphone port, Headphone port**

This V-series provide V6/V7 two types of front panel for users to choose, please refer to your product package for the front panel type you purchased.

1.3 Rear panel

The system rear panel includes the power connector and several I/O ports that allow convenient connection of devices.



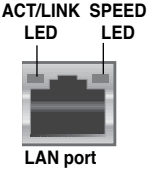
Do NOT cover the rear vent , and the ambient temperature is limited up to 35ºC to prevent the system from overheating.

1. **Voltage selector.** This switch allows you to adjust the system input voltage according to the voltage supply in your area. See the section “Voltage selector” on page 1-7 before adjusting this switch.
2. **Power connector.** This connector is for the power cable and plug.
3. **Power supply unit fan vent.** This vent is for the PSU fan that provides ventilation inside the power supply unit.

4. **Power Switch.** This switch is for switching on/off the power supply unit.
5. **Chassis fan vent.** This vent is for the fan that provides ventilation inside the system chassis.
6. **PS/2 mouse port.** This green 6-pin connector is for a PS/2 mouse.
7. **PS/2 keyboard port.** This purple 6-pin connector is for a PS/2 keyboard.
8. **DVI-D Out port.** This port is for any DVI-D compatible device and is HDCP compliant allowing playback of HD DVD, Blu-Ray and other protected content.
9. **Video Graphics Adapter (VGA) port.** This 15-pin port is for a VGA monitor or other VGA-compatible devices.
10. **USB 2.0 ports 1 ~ 4.** These 4-pin Universal Serial Bus (USB) ports are available for connecting USB 2.0 devices.
11. **LAN (RJ-45) port.** This port allows gigabit connection to a Local Area Network (LAN) through a network hub. Refer to the table below for the LAN port LED indications.

LAN port LED indications

Activity/Link LED		Speed LED	
Status	Description	Status	Description
OFF	No link	OFF	10 Mbps connection
ORANGE	Linked	ORANGE	100 Mbps connection
BLINKING	Data activity	GREEN	1 Gbps connection



12. **Microphone port (pink).** This port connects a microphone.
13. **Line Out port (lime).** This port connects a headphone or a speaker. In 4-channel and 6-channel configuration, the function of this port becomes Front Speaker Out.
14. **Line In port (light blue).** This port connects the tape, CD, DVD player, or other audio sources.

Refer to the audio configuration table below for the function of the audio ports in 2, 4, or 6-channel configuration.

Audio 2, 4, or 6-channel configuration

Port	Headset 2-channel	4-channel	6-channel
Light Blue	Line In	Rear Speaker Out	Rear Speaker Out
Lime	Line Out	Front Speaker Out	Front Speaker Out
Pink	Mic In	Mic In	Bass/Center

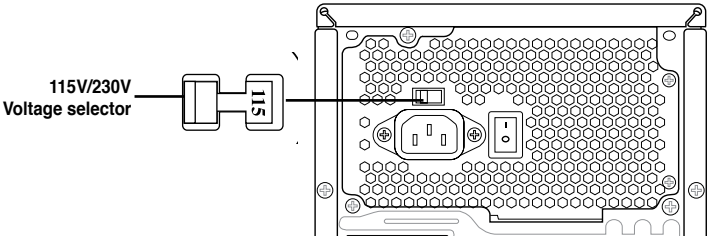
15. **Expansion slot covers.** Remove these covers when installing expansion cards.

Voltage selector

The PSU has a 115 V/230 V voltage selector switch located beside the power connector. Use this switch to select the appropriate system input voltage according to the voltage supply in your area.

If the voltage supply in your area is 100-127 V, set this switch to 115 V.

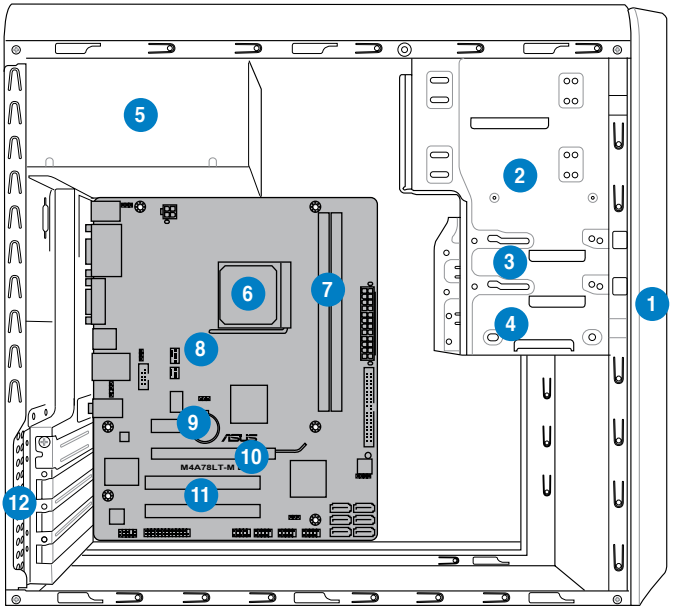
If the voltage supply in your area is 200-240 V, set this switch to 230 V.



Setting the switch to 115V in a 230V environment or 230V in a 115V environment will seriously damage the system!

1.4 Internal components

The illustration below is the internal view of the system when you remove the side cover and the power supply unit. The installed components are labeled for your reference.



1. Front panel cover
2. 5.25-inch optical drive bays
3. 3.5-inch drive bay
4. Hard disk drive bay
5. Power supply unit
6. CPU socket
7. DIMM sockets
8. ASUS motherboard
9. PCI Express x1 slot
10. PCI Express x16 slot
11. PCI slots
12. Metal bracket lock

Refer to the bundled Quick Installation Guide for installing additional system components and get assistance from professionals when you disassemble or assemble the system.

1.5 Qualified Vendors Lists (QVL)

DDR3-1066MHz capability

Vendor	Part No.	Size	SS/ DS	Chip Brand	Chip NO.	Timing	Voltage	DIMM socket support (Optional)	
								A*	B*
Crucial	CT25664BA1067.16FF	2048MB	DS	Micron	9HF22D9KPT	7	-	•	•
Crucial	CT25672BA1067.18FF	2048MB	DS	Micron	9GF22D9KPT(ECC)	7	-	•	•
Elpida	EBJ51UD8BAFA-AE-E	512MB	SS	Elpida	J5308BASE-AC-E	-	-	•	•
Kingston	KVR1066D3N7/1G	1024MB	SS	Kingston	D1288JEKAPGA7U	7	1.5V	•	•
Micron	MT8JTF12864AY-1G1D1	1024MB	SS	Micron	8ED22D9JNL	-	-	•	•
Micron	MT16JTF25664AY-1G1D1	2048MB	DS	Micron	8LD22D9JNL	-	-	•	•
Micron	MT16JTF25664AZ-1G1F1	2048MB	DS	Micron	9HF22D9KPT	7	-	•	•
Micron	MT18JSF25672AZ-1G1F1	2048MB	DS	Micron	9GF22D9KPT(ECC)	7	-	•	•
SAMSUNG	M378B2873EH1-CF8	1024MB	SS	Samsung	SEC 901 HCF8 K4B1G0846E	-	-	•	•

DDR3-1333MHz capability

Vendor	Part No.	Size	SS/ DS	Chip Brand	Chip NO.	Timing	Voltage	DIMM socket support (Optional)	
								A*	B*
Corsair	CM3X1024-1333C9	1024MB	SS	-	-	-	-	•	•
Corsair	CM3X1024-1333C9DHX	1024MB	DS	Corsair	-	-	-	•	•
Crucial	CT12872BA1339.9FF	1024MB	SS	Micron	91F22D9KPT(ECC)	9	-	•	•
Crucial	BL25664BA1336.16SFB1	4096MB(Kit of 2)	DS	-	-	6-6-6-20	1.8V	•	•
G.SKILL	F3-10600CL8D-2GBHK	1024MB	SS	G.SKILL	-	-	-	•	•
G.SKILL	F3-10666CL9T-6GBNQ	6144MB(Kit of 3)	DS	-	-	9-9-9-24	1.5V~1.6V	•	•
GEIL	GV34GB1333C7DC	2048MB	DS	-	-	7-7-7-24	1.5V	•	•
Kingmax	FLFE85F-B8MF9	2048MB	DS	Micron	8HD22D9JNM	-	-	•	•
Kingston	KVR1333D3N9/1G	1024MB	SS	Hynix	H5TQ1G83BFR	9	1.5V	•	•
Micron	MT9JSF 12872AZ-1G4F1	1024MB	SS	Micron	91F22D9KPT(ECC)	9	-	•	•
OCZ	OCZ3P13332GK	2048MB(Kit of 2)	SS	-	-	7-7-7-20	1.8V	•	•
SAMSUNG	M378B5673DZ1-CH9	2048MB	DS	Samsung	K4B1G0846D-HCH9	-	-	•	•
Transcend	TS128MLK64V3U	1024MB	SS	-	SEC 813HCH9 K4B1G0846D	-	-	•	•

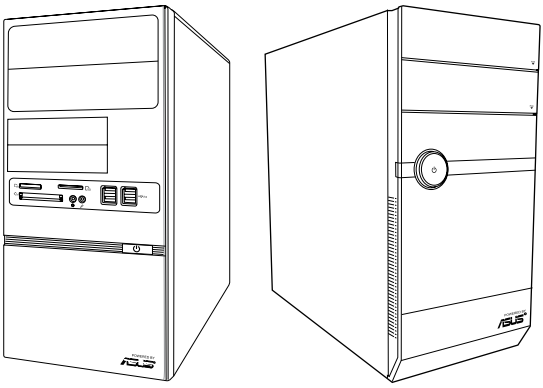
SS: Single-sided / DS: Double-sided
DIMM support:

- A*: Supports one module inserted into either slot as Single-channel memory configuration.
- B*: Supports one pair of modules inserted into both the blue slots as one pair of Dual-channel memory configuration.

Visit the ASUS website at www.asus.com for the latest QVL.

Chapter 2

This chapter helps you power up the system and install drivers and utilities from the support DVD.



Starting up

2.1 Installing an operating system

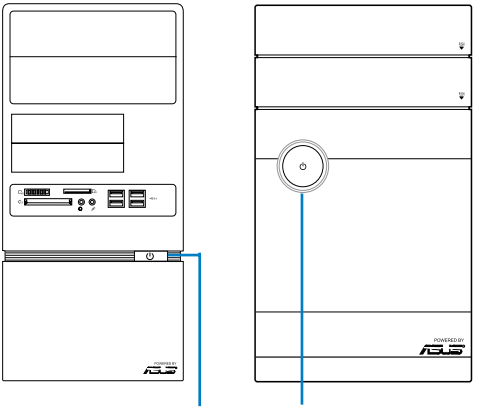
The barebone system supports Windows® XP/Vista/7 operating systems (OS). Always install the latest OS version and corresponding updates so you can maximize the features of your hardware.

Motherboard settings and hardware options vary. Use the setup procedures presented in this chapter for general reference only. Refer to your OS documentation for more information.

- Windows XP OS setup cannot recognize Serial ATA hard drives in a RAID set without the necessary drivers. Use a RAID driver disk when installing Windows XP OS to a Serial ATA hard drive included in a RAID set.
- From the Windows XP setup screen, press F6 when prompted then follow succeeding screen instructions to install the SATA drivers.

2.2 Powering up

Press the system power button (⏻) to enter the OS.



2.3 Support DVD information

The support DVD that came with the system contains useful software and several utility drivers that enhance the system features.

- Screen display and driver options may not be the same for different operating system versions.
- The contents of the support DVD are subject to change at any time without notice. Visit the ASUS website at www.asus.com for updates.

2.3.1 Running the support DVD

To begin using the support DVD, place the DVD in your optical drive. The DVD automatically displays the Drivers menu if Autorun is enabled in your computer.

Click an icon to display support DVD/motherboard information

Click an item to install

If Autorun is NOT enabled in your computer, browse the contents of the support DVD to locate the file ASSETUP.EXE from the BIN folder. Double-click the ASSETUP.EXE to run the DVD.

AMD Chipset Driver

Installs the AMD® chipset driver.

VIA Audio Driver

Installs the VIA audio driver and application.

AMD Graphics Driver

Installs the AMD® Graphics driver.

AMD Cool 'n' Quiet Driver

Installs the AMD® Cool 'n' Quiet driver.

Atheros AR8131 PCI-E Ethernet Controller

Installs the Atheros® AR8131 PCI-E Ethernet Controller.

ASUS EPU-4 Engine

Installs ASUS EPU-4 Engine.

Norton Internet Security 2009

Installs the Norton Internet Security 2009.

2.3.2 Utilities menu

The Utilities menu shows the applications and other software that the motherboard supports.

ASUS Cool 'n' Quiet Utility

Installs ASUS Cool 'n' Quiet utility.

ASUS Update

Allows you to download the latest version of the BIOS from the ASUS website.

Before using the ASUS Update, make sure that you have an Internet connection so you can connect to the ASUS website.

ASUS AI Manager

Installs the ASUS AI Manager.

Atheros Ethernet Utility

Installs the Atheros® Ethernet Utility.

Adobe Reader 9

Installs the Adobe® Acrobat® Reader that allows you to open, view, and print documents in Portable Document Format (PDF).

AMD RAID/AHCI RaidXpert

Installs the AMD® RAID/AHCI Xpert utility.

AMD OverDrive Utility (AOD)

Installs the AMD OverDrive utility.

ASUS Turbo Key

Installs ASUS Turbo Key.

ASUS Express Gate Installer

Installs the ASUS Express Gate application.

Microsoft DirectX 9.0c

Installs the Microsoft® DirectX 9.0c driver. The Microsoft DirectX® 9.0c is a multimedia technology that enhances computer graphics and sound. DirectX® improves the multimedia features of you computer so you can enjoy watching TV and movies, capturing videos, or playing games in your computer. Visit the Microsoft website (www.microsoft.com) for updates.

2.3.3 Make Disk menu

The Make Disk menu allows you to make a RAID driver disk.

Make AMD RAID/AHCI Driver Disk

Allows you to create an AMD® Serial ATA (SATA) RAID/AHCI driver disk.

2.3.4 Manual menu

The Manual menu contains a list of supplementary user manuals. Click an item to open the folder of the user manual.

Most user manual files are in Portable Document Format (PDF). Install the Adobe® Reader from the Utilities menu before opening a user manual file.

ASUS Motherboard Installation Guide

Allows you to open the ASUS Motherboard Installation Guide.

ASUS Motherboard Utility Guide

Allows you to open the ASUS Motherboard Utility Guide.

VIA HD Audio User's Manual

Allows you to open the VIA HD Audio User's Manual.

NIS 2009 Subscription Renewal Guide

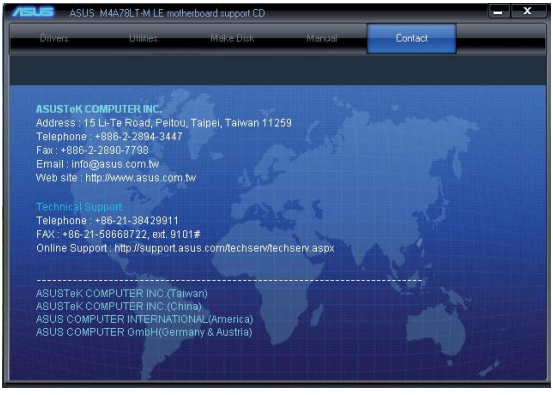
Allows you to open the NIS 2009 Subscription Renewal Guide.

AMD RAID/AHCI User's Manual

Allows you to open the AMD RAID/AHCI User's Manual.

2.3.5 ASUS Contact information

Click the Contact tab to display the ASUS contact information. You can also find this information on the inside front cover of this user guide.

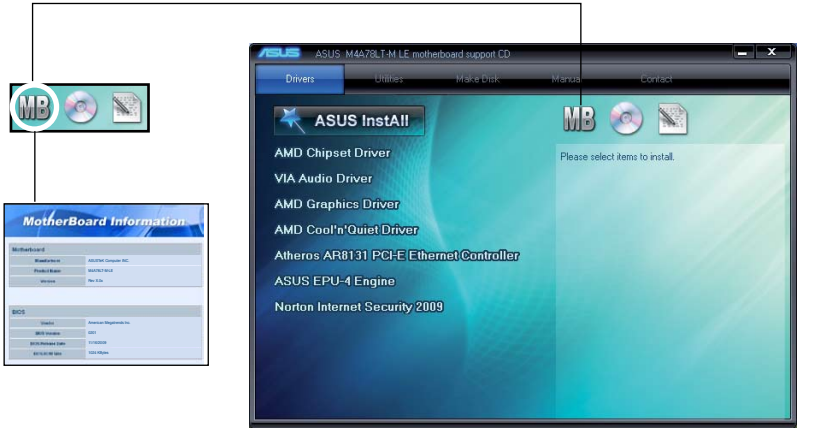


2.3.6 Other information

The icons on the top right corner of the screen give additional information on the motherboard and the contents of the support DVD. Click an icon to display the specified information.

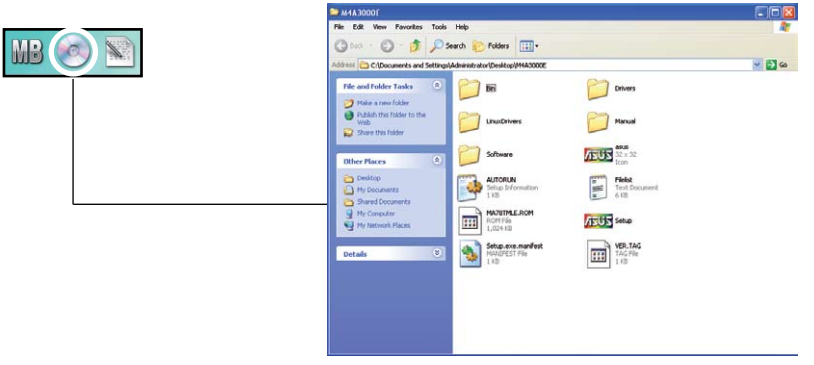
Motherboard Info

Displays the general specifications of the motherboard.



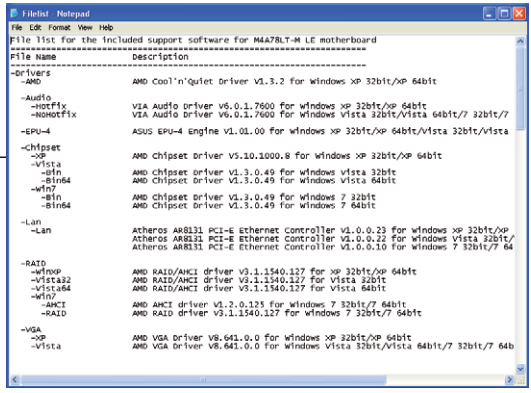
Browse this DVD

Displays the support DVD contents in graphical format.



Filelist

Displays the contents of the support DVD and a brief description of each in text format.


Filelist - Notepad
File Edit Format View Help
File list for the included support software for M4A78LT-M LE motherboard
File Name Description
-Drivers
-AMD AMD Cool'n'Quiet Driver V1.3.2 for Windows XP 32bit/XP 64bit
-Audio
-Hotfix VIA Audio Driver V6.0.1.7600 for Windows XP 32bit/XP 64bit
-NoHotfix VIA Audio Driver V6.0.1.7600 for Windows Vista 32bit/Vista 64bit/7 32bit/7
-EPU-4 ASUS EPU-4 Engine V1.01.00 for Windows XP 32bit/XP 64bit/Vista 32bit/Vista
-Chipset
-XP AMD Chipset Driver V5.10.1000.8 for Windows XP 32bit/XP 64bit
-Vista
-Bin AMD Chipset Driver V1.3.0.49 for Windows Vista 32bit
-Bin64 AMD Chipset Driver V1.3.0.49 for Windows Vista 64bit
-Win7
-Bin AMD Chipset Driver V1.3.0.49 for Windows 7 32bit
-Bin64 AMD Chipset Driver V1.3.0.49 for Windows 7 64bit
-Lan
-Lan Atheros AR8131 PCI-E Ethernet Controller V1.0.0.23 for Windows XP 32bit/XP
Atheros AR8131 PCI-E Ethernet Controller V1.0.0.22 for Windows Vista 32bit/
Atheros AR8131 PCI-E Ethernet Controller V1.0.0.10 for Windows 7 32bit/7 64
-RAID
-WinXP AMD RAID/AHCI driver V3.1.1540.127 for XP 32bit/XP 64bit
-Vista32 AMD RAID/AHCI driver V3.1.1540.127 for Vista 32bit
-Vista64 AMD RAID/AHCI driver V3.1.1540.127 for Vista 64bit
-Win7
-AMCI AMD AHCI driver V1.2.0.125 for Windows 7 32bit/7 64bit
-RAID AMD RAID driver V3.1.1540.127 for Windows 7 32bit/7 64bit
-VGA
-XP AMD VGA Driver V8.641.0.0 for Windows XP 32bit/XP 64bit
-Vista AMD VGA Driver V8.641.0.0 for Windows Vista 32bit/Vista 64bit/7 32bit/7 64b

2.4 Software information

Most of the applications in the support DVD have wizards that will conveniently guide you through the installation. View the online help or readme file that came with the software for more information.

2.4.1 ASUS AI Manager

ASUS AI Manager is a utility which gives you quick and easy access to frequently-used applications.

Installing AI Manager

To install AI Manager on your computer:

1. Place the support CD in the optical drive. If Autorun is enabled, the Drivers installation wizard appears.

If Autorun is not enabled in your computer, locate the setup.exe file from the ASUS AI Manager folder in the support CD. Double-click the setup.exe file to start installation.

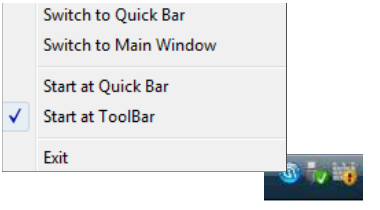
2. Click the **Utilities** tab, then click **ASUS AI Manager**.
3. Follow the screen instructions to complete the installation.

Launching AI Manager

To launch the AI Manager from the Windows® desktop, click **Start > All Programs > ASUS > AI Manager 1.xx.xx > AI Manager**. The AI Manager quick bar appears on the desktop.

After launching the application, the AI Manager icon appears in the Windows® taskbar.

Right-click this icon to switch between quick bar and main window, and to launch the AI Manager either from the quick bar or taskbar.



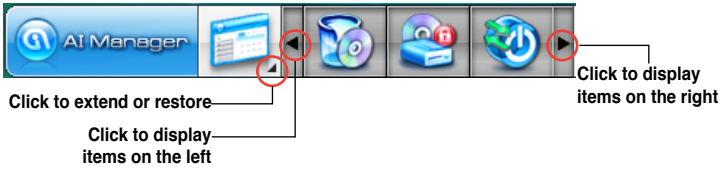
AI Manager quick bar

The AI Manager quick bar saves the desktop space and allows you to launch the ASUS utilities or display system information easily. Click any of the Main, My Favorites, Support or Information tab to display the menu's contents.

Click the Maximize/restore button to switch between full window and quick bar. Click the Minimize button to keep the AI Manager on the taskbar. Click the Close button to quit the AI Manager.

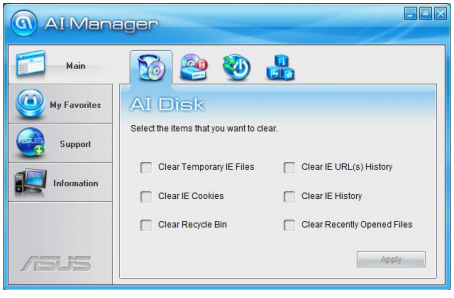
Main

The Main menu contains five utilities: **AI Disk**, **AI Security**, **AI Boosting**, and **AI Probe**. Click the arrow on the Main menu icon to browse through the utilities in the main menu.



AI Disk

AI Disk allows you to easily clear temporary IE files, IE cookies, IE URLs, IE history, or the Recycle Bin. Click the AI Disk icon on the quick bar to display the full AI Disk window and select the items you want to clear. Click **Apply** when done.



AI Security

AI Security enables you to set a password to secure your devices, such as USB flash disks and CD/DVD disks, from unauthorized access.

To lock a device:

1. When using AI Security for the first time, you are asked to set a password. Enter a password with at most 20 alphanumeric characters.
2. Confirm the password.
3. Key in the password hint (recommended).
4. When done, click **Ok**.
5. Select the device you want to lock, then click **Apply**.
6. Key in the password you have set previously, then click **Ok**. The selected device is locked and not accessible.

To unlock the selected device:

1. Uncheck the checkbox of the selected device, then click **Apply**.
2. Key in the password you have set previously, then click **Ok**. The selected device is unlocked.

To change password:

Click **Change Password**, then follow the on-screen instructions to change password.

AI Booting

AI Booting allows you to specify the boot device priority sequence.

To specify the boot sequence:

1. Select a device, then click on the left/right button to specify the boot sequence.
2. When done, press **Apply**.

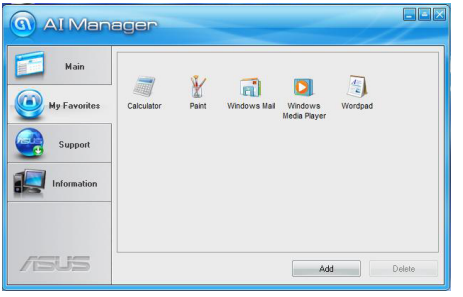
AI Probe

AI Probe automatically detects and displays the motherboard and CPU temperatures, CPU fan speed, and the voltage output. You can adjust the values as you need.

Click the **Temperature**, **Voltage**, or **Fan Speed** tab, then select an item to enable and change the value by dragging the bar.

My Favorites

My Favorites allows you to add applications that you frequently use, saving you from searching for the applications throughout your computer.



To add an application:

1. Click **Add**, then locate the application you want to add to **My Favorites**.
2. Click **Open** on the file location window. The application is added to **My Favorites** list.

Right click on the application icon to launch, delete, or rename the selected application. You can also double click to launch the selected application.

Support

Click any links on the **Support** window to go to the ASUS website, technical support website, download support website, or contact information.

Information

Click the tab on the **Information** window to see the detailed information about your system, motherboard, CPU, BIOS, installed device(s), and memory.

2.4.2 ASUS Express Gate

ASUS Express Gate is an instant-on environment that gives you quick access to the Internet. Eight seconds after powering on your computer, you can instantly surf the Internet, use Skype or other Express Gate applications without entering the Windows® OS.

- The actual boot time depends on the system configuration.
- Download the latest Express Gate version from the ASUS website at www.asus.com.

Installing ASUS Express Gate

- Ensure to install ASUS Express Gate from the motherboard Support DVD before use.
- ASUS Express Gate supports installation on SATA HDDs, USB HDDs, and flash drives with at least 1.2GB free disk space. When installing ASUS Express Gate on USB HDDs and flash drives, connect the drives to the motherboard USB port before turning on the computer.
- ASUS Express Gate supports SATA devices in IDE mode only.
- ASUS Express Gate supports SATA devices connected to motherboard chipset-controlled onboard SATA ports only. All onboard extended SATA ports and external SATA ports are NOT supported. See section 1.2.1 Motherboard layout for the exact location of the onboard SATA ports.
- Ensure that your monitor supports the screen resolution of 1024 x 768 before using ASUS Express Gate; otherwise, it will not launch after you power on your computer and your computer boots to the OS directly.
- We recommend that you install 1GB system memory or larger for a better performance of ASUS Express Gate.

To install Express Gate on your computer:

1. Place the Support DVD into the optical drive. The **Drivers** menu appears if **Autorun** is enabled on your computer.
2. Click the **Utilities** tab, then click **ASUS Express Gate**.
3. Select your preferred language, then click **OK**.
4. The InstallShield Wizard for Express Gate appears. Click **Next** to continue.

5. Select the target drive where you want to install Express Gate. If you have multiple partitions installed on your computer, it is recommended to install Express Gate in Drive C. Click **Next** to continue.
6. Follow the onscreen instructions to complete the installation.

The Splash Screen

The Express Gate's splash screen appears eight seconds after you power on your computer.

The actual boot time depends on the system configuration.

Click an application icon to enter the Express Gate environment and launch the selected application
Turn off the computer
Continue booting to the existing OS when the timer above the Exit icon counts down to zero (0); click to immediately enter the existing OS

- To enter the motherboard BIOS Setup program, click **Exit** on the splash screen and then hold down **<Del>** during POST.
- Click in the Express Gate environment for the detailed software instructions.

Splash screen hot-keys

Key	Function
<PAUSE/BREAK>	Power off
ESC	Continue to boot OS

Express Gate Environment hot-keys:

Key	Function
<Alt> + <Tab>	Switch between softwares
<Ctrl> + <Alt> + <Del>	Bring up Power-Off dialog box
<Ctrl> + <Alt> + <Print Screen>	Save screen snapshot as picture to file

When you are using ASUS Express Gate for the first time, launch an application from the splash screen, a first-time wizard will appear and guide you through basic Express Gate configurations including language, date, and time.

Using the LaunchBar

The LaunchBar allows you to launch applications and configure the Express Gate settings. The LaunchBar can be configured to auto-hide and dock at the bottom or top of the screen.

Launches the **Web Browser** for quick access to the Internet. You can view PDF files from the web pages or your USB storage device.

ASUS Express Gate supports file uploading from SATA HDDs, ODDs, and USB drives. It supports file downloading to USB drives only.

Launches the **Online Games**.

Launches the **Photo Manager**.

Launches the **Chat** instant messaging tool.

Launches the **Skype** application which allows you to chat with or call other people on Skype.

The indicator under an application icon indicates that the application is running. If an application stops responding, right-click its icon then select **Close** to force it to close.

The smaller icons on the right side of the LaunchBar are:

Displays your Express Gate version.

Launches the help file.

Launches the **Configuration Panel** which allows you to specify network settings and other settings.

Configures the network.

Adjusts the volume.

This icon appears only when a removable storage device / USB drive is connected. Left-click this icon to launch the **File Manager** window. Right-click it to eject the removable storage device / USB drive.

Exits ASUS Express Gate. Click **Yes** to enter the operating system you installed on the hard disk drive.

Powers off the computer.

Accessing the Internet

To configure the network settings:

1. Click **Configuration Panel** on the LaunchBar.
2. Click **Network**.
3. Make the proper network configurations. Each network interface is enabled immediately after you tick the **Enable** checkbox.

The number of the LAN ports vary with the motherboard.

- **LAN settings**

  If you connect your computer to a home router that is connected to your DSL/ cable modem, enable all the LAN ports. Express Gate automatically uses the connected port.

  If you plug the network cable into a different port while Express Gate is running (e.g. move the cable from LAN1 to LAN2, restart Express Gate to activate the new setting.

  If your computer does not automatically get network settings from a DHCP server, click **Setup** to configure the static IP settings manually. If your computer automatically gets network settings from a DHCP server, skip this step.

- **WiFi settings (if supported)**

  If you want to connect to a wireless network, click **Setup** to configure the WiFi options. In the **WiFi** tab of the **Advanced Network Settings** box, key in the network name of the wireless access point in the **SSID** field. If Security is enabled on the wireless access point, select the corresponding security algorithm from the dropdown list such as WEP or WAP in the **Encryption Type** field, and key in the password. Click **OK** to enable WiFi and establish the wireless connection.

- **xDSL / Cable dial-up (PPPoE) settings:**

  If you use a network cable connected directly to your DSL/cable modem, click **Setup** to configure the xDSL/cable dial-up settings. Choose whether the DSL/cable modem is connected to your computer's LAN port. Key in the username and password for your account. Click **OK** to enable xDSL/cable dial-up and establish the PPPoE connection. When PPPoE is enabled, the port it uses will automatically be unchecked.

Using the Online Games

Express Gate introduces a **Splashtop Gaming** portal site which provides interesting games in different categories.

Enable the Internet connection to use the Online Games feature.

Using the Photo Manager

Photo Manager allows you to view pictures saved on your hard drive or external storage devices. You can view pictures in thumbnail view, in an enlarged view individually, in a filename/data list view, or play them in a slideshow. JPEG, GIF, BMP, and PNG formats are supported. Refer to the online Help for details.

ASUS Express Gate supports SATA devices connected to **motherboard chipset-controlled onboard SATA ports** only. All onboard extended SATA ports and external SATA ports are NOT supported.

Restoring to factory settings

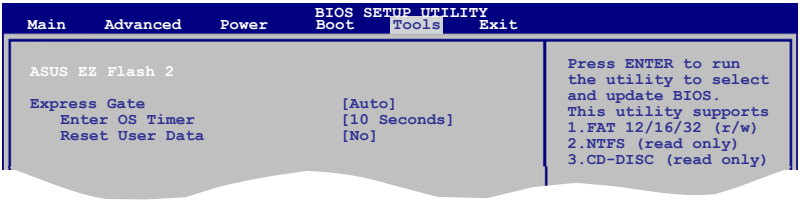
To restore Express Gate to the factory settings:

1. Click **Configuration Panel** on the LaunchBar.
2. Click **Environment Settings**.
3. Click **Restore** from the **General** tab. A confirmation dialog box appears. Click **Yes** to immediately restart Express Gate to finish clearing system settings. All bookmarks, network settings, and other changes you made will be cleared.

The first-time wizard will run again when you enter the Express Gate environment after clearing its settings.

Configuring Express Gate in BIOS Setup

To enter the motherboard BIOS Setup program, click **Exit** on the splash screen and then hold down **<Del>** during POST. Go to the **Tools** menu to configure Express Gate. Refer to **4.7.2 Express Gate** for details.

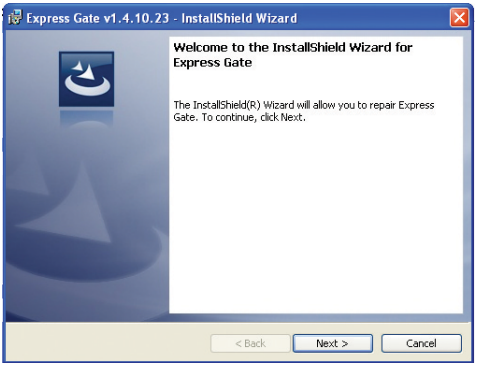


Repairing Express Gate

In case Express Gate does not start normally, reinstall the software or use the repair utility to repair Express Gate.

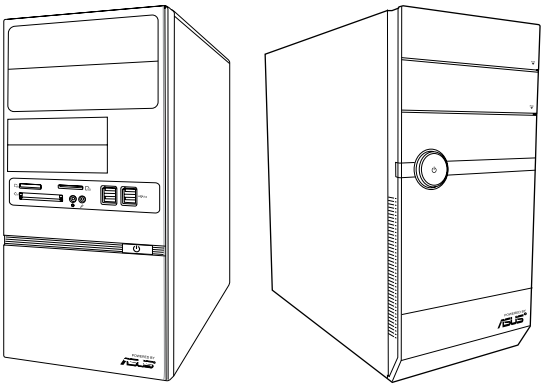
To repair Express Gate:

Click **Start > All Programs > Express Gate > Express Gate Installer > Repair this software**, then follow the onscreen instructions to complete the repair.


Express Gate v1.4.10.23 - InstallShield Wizard
Welcome to the InstallShield Wizard for Express Gate
The InstallShield(R) Wizard will allow you to repair Express Gate. To continue, click Next.
< Back
Next >
Cancel

Chapter 3

This chapter gives information about he motherboard that comes with the system. This chapter includes the motherboard layout, jumper settings, and connector locations.

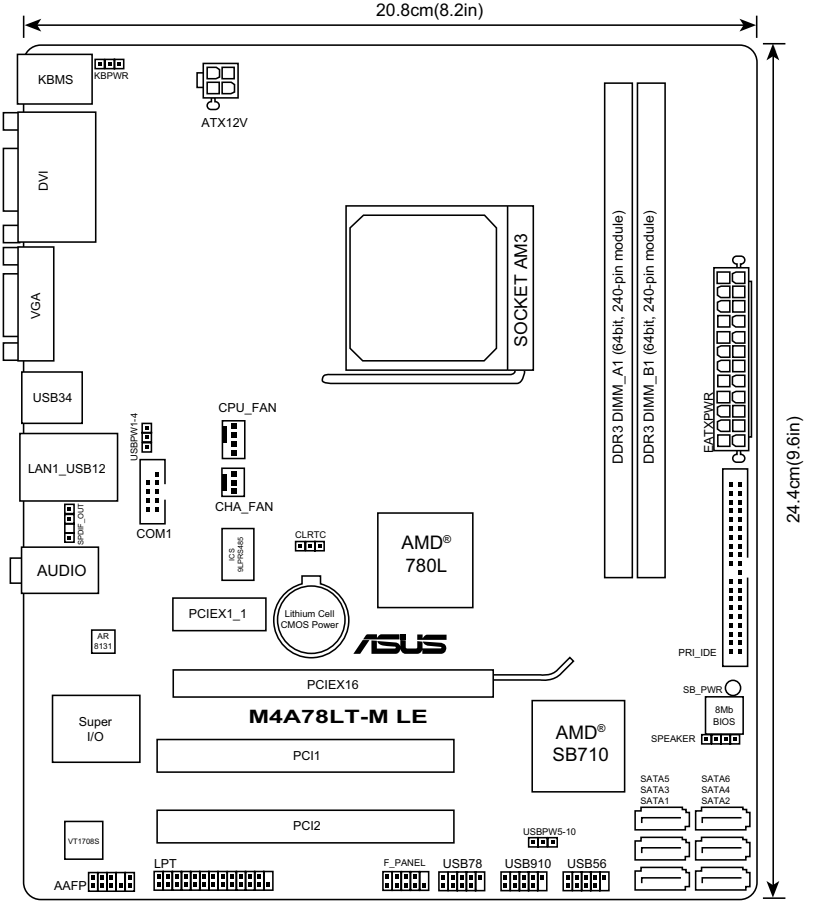


Motherboard info

3.1 Introduction

The Vintage V-series M4A3000E barebone system comes with an ASUS motherboard. This chapter provides technical information about the motherboard for future upgrades or system reconfiguration.

3.2 Motherboard layout



3.3 Jumpers

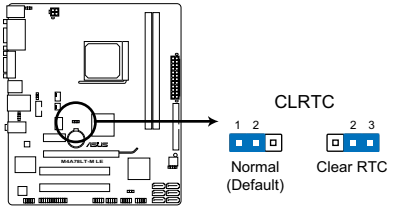
1. Clear RTC RAM (3-pin CLRTC)

This jumper allows you to clear the Real Time Clock (RTC) RAM in CMOS. You can clear the CMOS memory of date, time, and system setup parameters by erasing the CMOS RTC RAM data. The onboard button cell battery powers the RAM data in CMOS, which include system setup information such as system passwords.

To erase the RTC RAM:

1. Turn OFF the computer and unplug the power cord.
2. Move the jumper cap from pins 1-2 (default) to pins 2-3. Keep the cap on pins 2-3 for about 5-10 seconds, then move the cap back to pins 1-2.
3. Plug the power cord and turn ON the computer.
4. Hold down the **<Del>** key during the boot process and enter BIOS setup to re-enter data.

Except when clearing the RTC RAM, never remove the cap on CLRTC jumper default position. Removing the cap will cause system boot failure!

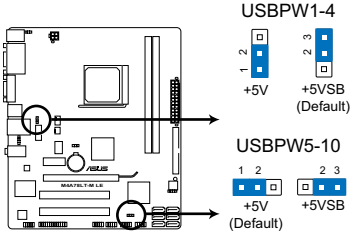


M4A78LT-M LE Clear RTC RAM

- If the steps above do not help, remove the onboard battery and move the jumper again to clear the CMOS RTC RAM data. After clearing the CMOS, reinstall the battery.
- You do not need to clear the RTC when the system hangs due to overclocking. For system failure due to overclocking, use the CPU Parameter Recall (C.P.R.) feature. Shut down and reboot the system, then the BIOS automatically resets parameter settings to default values.

2. USB device wake-up (3-pin USBPW1-4, USBPW5-10)

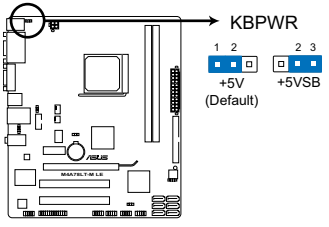
Set these jumpers to +5V to wake up the computer from S1 sleep mode (CPU stopped, DRAM refreshed, system running in low power mode) using the connected USB devices. Set these jumpers to +5VSB to wake up the compurer from S3 and S4 sleep modes (no power to CPU, DRAM in slow refresh, power supply in reduced power mode).



M4A78LT-M LE USB device wake-up

3. Keyboard power (3-pin KBPWR)

This jumper allows you to enable or disable the keyboard wake-up feature. When you set this jumper to pins 2-3 (+5VSB), you can wake up the computer by pressing a key on the keyboard. This feature requires an ATX power supply that can supply at least 1A on the +5VSB lead, and a corresponding setting in the BIOS.



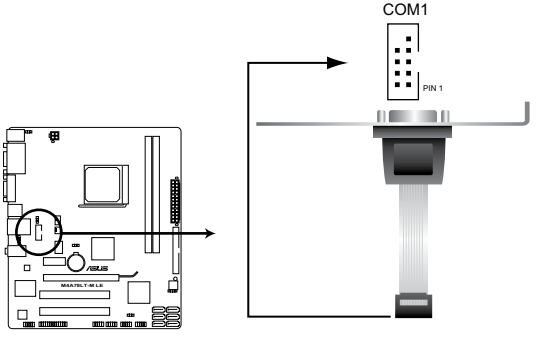
M4A78LT-M LE Keyboard power setting

3.4 Connectors

1. Serial port connectors (10-1 pin COM1)

The connector is for a serial (COM) port. Connect the serial port module cable to the connector, then install the module to a slot opening at the back of the system chassis.

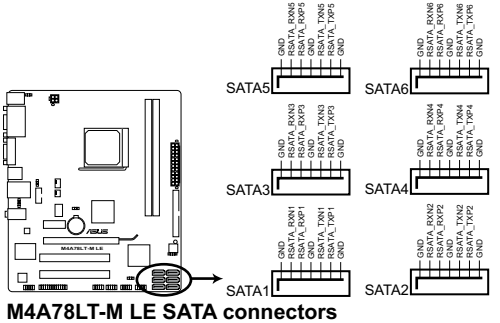
The serial port bracket (COM1) is purchased separately.



M4A78LT-M LE Serial port (COM1) connector

2. Serial ATA connectors (7-pin SATA1~6)

These connectors are for the Serial ATA signal cables for Serial ATA hard disk drives.



M4A78LT-M LE SATA connectors

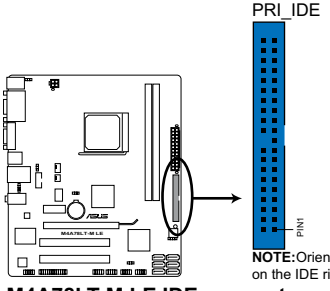
3. IDE connector (40-1 pin PRI_IDE)

The onboard IDE connector is for the Ultra DMA 133/100 signal cable. There are three connectors on each Ultra DMA 133/100 signal cable: blue, black, and gray. Connect the blue connector to the motherboard's IDE connector, then select one of the following modes to configure your device.

	Drive jumper setting	Mode of device(s)	Cable connector
Single device	Cable-Select or Master	-	Black
Two devices	Cable-Select	Master	Black
		Slave	Gray
	Master	Master	Black or gray
	Slave	Slave	

- Pin 20 on the IDE connector is removed to match the covered hole on the Ultra DMA cable connector. This prevents incorrect insertion when you connect the IDE cable.
- Use the 80-conductor IDE cable for Ultra DMA 133/100 IDE devices.

If any device jumper is set as "Cable-Select," ensure that all other device jumpers have the same setting.

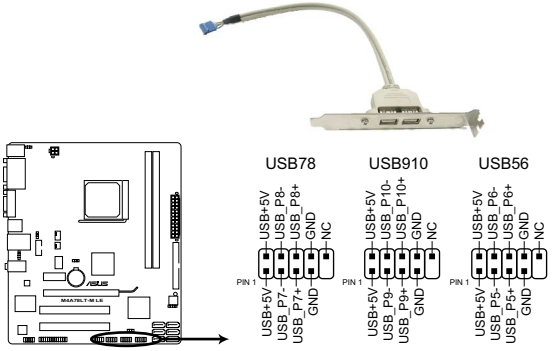


NOTE: Orient the red markings on the IDE ribbon cable to PIN 1.

M4A78LT-M LE IDE connector

4. USB connectors (10-1 pin USB56, USB78, USB910)

These connectors are for USB 2.0 ports. Connect the USB module cable to any of these connectors, then install the module to a slot opening at the back of the system chassis. These USB connectors comply with USB 2.0 specification that supports up to 480 Mbps connection speed.



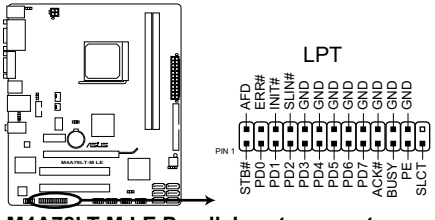
M4A78LT-M LE USB2.0 connectors

Never connect a 1394 cable to the USB connectors. Doing so will damage the motherboard!

The USB module is purchased separately.

5. LPT connector (26-1 pin LPT)

The LPT (Line Printing Terminal) connector supports devices such as a printer. LPT standardizes as IEEE 1284, which is the parallel port interface on IBM PC-compatible computers.

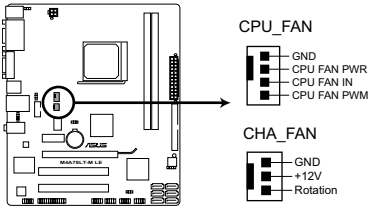


M4A78LT-M LE Parallel port connector

6. CPU, chassis and power fan connectors (4-pin CPU_FAN, 3-pin CHA_FAN)

Connect the fan cables to the fan connectors on the motherboard, ensuring that the black wire of each cable matches the ground pin of the connector.

DO NOT forget to connect the fan cables to the fan connectors. Insufficient air flow inside the system may damage the motherboard components. These are not jumpers! **DO NOT** place jumper caps on the fan connectors!

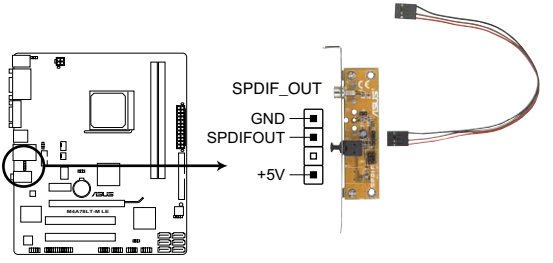


M4A78LT-M LE fan connectors

Only the 4-pin CPU fan supports the ASUS Q-Fan feature.

7. Digital Audio connector (4-1 pin SPDIF_OUT)

This connector is for the S/PDIF audio module to allow digital sound output. Connect one end of the S/PDIF audio cable to this connector and the other end to the S/PDIF module.

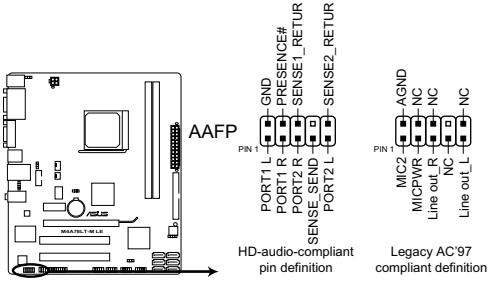


M4A78LT-M LE Digital audio connector

The S/PDIF out module is purchased separately.

8. Front panel audio connector (10-1 pin AAFP)

This connector is for a chassis-mounted front panel audio I/O module that supports either HD Audio or legacy AC'97 audio standard.

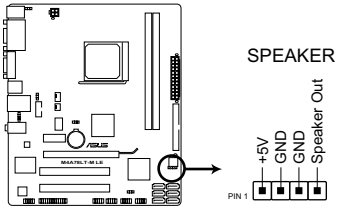


M4A78LT-M LE Front panel audio connector

- We recommend that you connect a high-definition front panel audio module to this connector to avail of the motherboard's high-definition audio capability.
- By default, this connector is set to [**HD Audio**]. If you want to connect a High Definition front panel audio module to this connector, set the **Front Panel Select** item in the BIOS to [**HD Audio**]. See section **4.4.3 Onboard Devices Configuration** for details.

9. Speaker connector (4-pin SPEAKER)

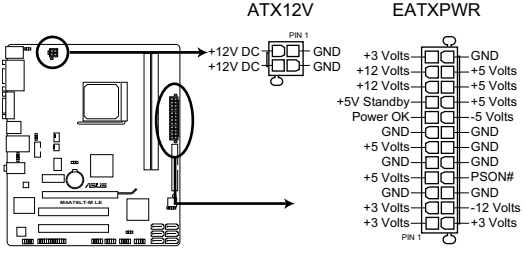
This 4-pin connector is for the chassis-mounted system warning speaker. The speaker allows you to hear system beeps and warnings.



M4A78LT-M LE Speaker out connector

10. ATX power connectors (24-pin EATXPWR, 4-pin ATX12V)

These connectors are for ATX power supply plugs. The power supply plugs are designed to fit these connectors in only one orientation. Find the proper orientation and push down firmly until the connectors completely fit.

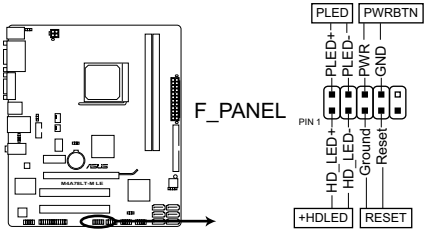


M4A78LT-M LE ATX power connectors

- For a fully configured system, we recommend that you use a power supply unit (PSU) that complies with ATX 12 V Specification 2.0 (or later version) and provides a minimum power of 300 W.
- **DO NOT** forget to connect the 4-pin ATX12V power plug; otherwise, the system will not boot.
- Use of a PSU with a higher power output is recommended when configuring a system with more power-consuming devices. The system may become unstable or may not boot up if the power is inadequate.
- The ATX 12 V Specification 2.0-compliant (300W) PSU has been tested to support the motherboard power requirements.

11. System panel connector (10-1 pin F_PANEL)

This connector supports several chassis-mounted functions.



M4A78LT-M LE System panel connector

- **System power LED (2-pin PLED)**

  This 2-pin connector is for the system power LED. Connect the chassis power LED cable to this connector. The system power LED lights up when you turn on the system power, and blinks when the system is in sleep mode.

- **Hard disk drive activity LED (2-pin +HDLED)**

  This 2-pin connector is for the HDD Activity LED. Connect the HDD Activity LED cable to this connector. The HD LED lights up or flashes when data is read from or written to the HDD.

- **ATX power button/soft-off button (2-pin PWRBTN)**

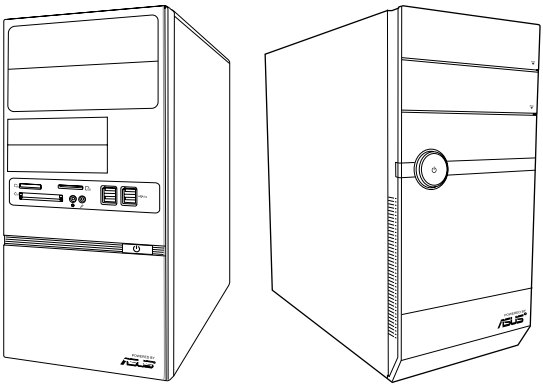
  This connector is for the system power button. Pressing the power button turns the system on or puts the system in sleep or soft-off mode depending on the BIOS settings. Pressing the power switch for more than four seconds while the system is ON turns the system OFF.

- **Reset button (2-pin RESET)**

  This 2-pin connector is for the chassis-mounted reset button for system reboot without turning off the system power.

Chapter 4

This chapter tells how to change system settings through the BIOS Setup menus and describes the BIOS parameters.



BIOS setup

4.1 Managing and updating your BIOS

The following utilities allow you to manage and update the motherboard Basic Input/Output System (BIOS) setup.

1. **ASUS Update**: Updates the BIOS in Windows® environment.
2. **ASUS EZ Flash 2:** Updates the BIOS using a USB flash disk.
3. **ASUS CrashFree BIOS 3:** Updates the BIOS using a bootable USB flash disk or the motherboard support DVD when the BIOS file fails or gets corrupted.

Refer to the corresponding sections for details on these utilities.

Save a copy of the original motherboard BIOS file to a USB flash disk in case you need to restore the BIOS in the future.

4.1.1 ASUS Update utility

The ASUS Update is a utility that allows you to manage, save, and update the motherboard BIOS in Windows® environment. The ASUS Update utility allows you to:

- Save the current BIOS file
- Download the latest BIOS file from the Internet
- Update the BIOS from an updated BIOS file
- Update the BIOS directly from the Internet, and
- View the BIOS version information.

This utility is available in the support DVD that comes with the motherboard package.

ASUS Update requires an Internet connection either through a network or an Internet Service Provider (ISP).

Installing ASUS Update

To install ASUS Update:

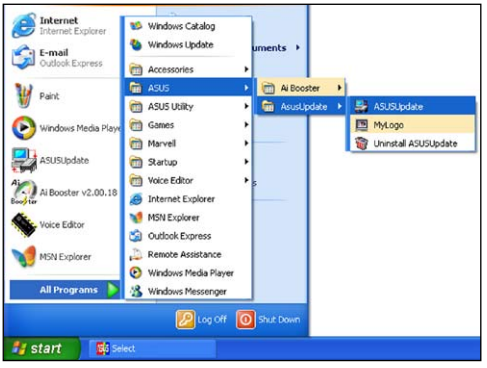
1. Place the support DVD in the optical drive. The Drivers menu appears.
2. Click the **Utilities** tab, then click **ASUS Update**.
3. The ASUS Update utility is copied to your system.

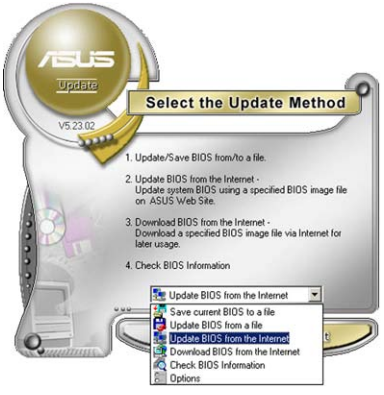
Quit all Windows® applications before you update the BIOS using this utility.

Updating the BIOS through the Internet

To update the BIOS through the Internet:

1. Launch the ASUS Update utility from the Windows® desktop by clicking **Start > Programs > ASUS > ASUSUpdate > ASUSUpdate**. The ASUS Update main window appears.



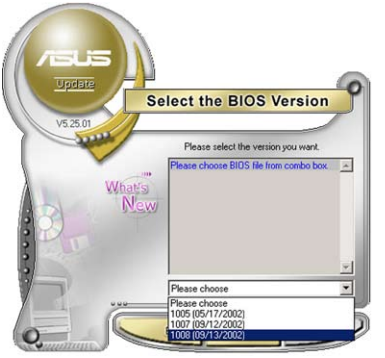

Update
V5.23.02
Select the Update Method
1. Update/Save BIOS from/to a file.
2. Update BIOS from the Internet - Update system BIOS using a specified BIOS image file on ASUS Web Site.
3. Download BIOS from the Internet - Download a specified BIOS image file via Internet for later usage.
4. Check BIOS Information
Update BIOS from the Internet
Save current BIOS to a file
Update BIOS from a file
Update BIOS from the Internet
Download BIOS from the Internet
Check BIOS Information
Options

2. Select **Update BIOS** from the Internet option from the drop-down menu, then click **Next**.

Update
V5.23.02
Select the Update Server
Before Continue, please make sure that your system is connected to the Internet. You can then choose a web site by yourself or click AutoSelect button, ASUS Update will choose the best site based on network traffic automatically for you.
Passive
Proxy Setting
Auto Select
ftp.asus.com.tw
Back
Cancel
Next

3. Select the ASUS FTP site nearest you to avoid network traffic, or click **Auto Select**. Click **Next**.

4. From the FTP site, select the BIOS version that you wish to download. Click **Next**.
5. Follow the screen instructions to complete the update process.

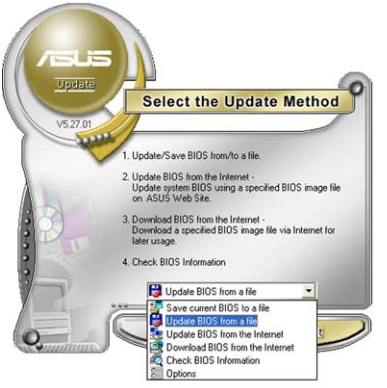


The ASUS Update utility is capable of updating itself through the Internet. Always update the utility to avail all its features.

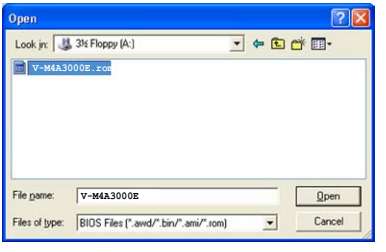
Updating the BIOS through a BIOS file

To update the BIOS through a BIOS file:

1. Launch the ASUS Update utility from the Windows® desktop by clicking **Start > Programs > ASUS > ASUSUpdate > ASUSUpdate**. The ASUS Update main window appears.
2. Select Update BIOS from a file option from the drop-down menu, then click **Next**.


Update
V5.27.01
Select the Update Method
1. Update/Save BIOS from/to a file.
2. Update BIOS from the Internet - Update system BIOS using a specified BIOS image file on ASUS Web Site.
3. Download BIOS from the Internet - Download a specified BIOS image file via Internet for later usage.
4. Check BIOS Information
Update BIOS from a file
Save current BIOS to a file
Update BIOS from a file
Update BIOS from the Internet
Download BIOS from the Internet
Check BIOS Information
Options

3. Locate the BIOS file from the Open window, then click **Open**.
4. Follow the screen instructions to complete the update process.



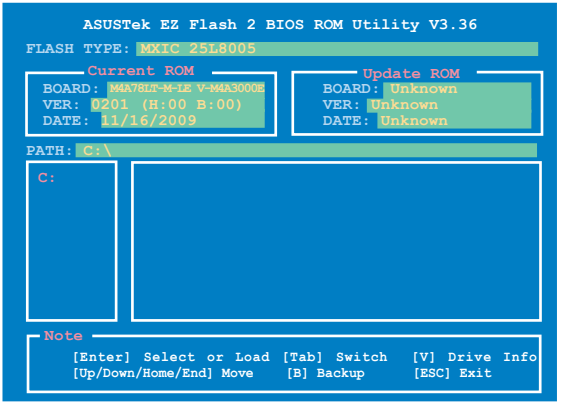
4.1.2 ASUS EZ Flash 2 utility

The ASUS EZ Flash 2 feature allows you to update the BIOS without having to go through the long process of booting from a floppy disk and using a DOS-based utility. The EZ Flash 2 utility is built-in the BIOS chip so it is accessible by pressing <Alt> + <F2> during the Power-On Self Tests (POST).

To update the BIOS using EZ Flash 2:

1. Visit the ASUS website (www.asus.com) to download the latest BIOS file for the motherboard.
2. Save the BIOS file to a USB flash disk, then restart the system.
3. You can launch the EZ Flash 2 by two methods.

   (1) Insert the USB flash disk that contains the BIOS file to the the USB port. Press <Alt> + <F2> during POST to display the following.



   (2) Enter BIOS setup program. Go to the **Tools** menu to select **EZ Flash2** and press <Enter> to enable it.

   You can switch between drives by pressing <Tab> before the correct file is found. Then press <Enter>.

4. When the correct BIOS file is found, EZ Flash 2 performs the BIOS update process and automatically reboots the system when done.

- This function can support devices such as USB flash disk with **FAT 32/16** format and single partition only.
- Do not shut down or reset the system while updating the BIOS to prevent system boot failure!

4.1.3 ASUS CrashFree BIOS 3 utility

The ASUS CrashFree BIOS 3 is an auto recovery tool that allows you to restore the BIOS file when it fails or gets corrupted during the updating process. You can update a corrupted BIOS file using the motherboard support DVD or a removable device that contains the updated BIOS file.

- Before using this utility, rename the BIOS file in the removable device into **MA78TMLE.ROM**.
- The BIOS file in the support DVD may not be the latest version. Download the latest BIOS file from the ASUS website at www.asus.com.
- The removable devices that ASUS CrashFree BIOS support vary with motherboard models. For motherboards without the floppy connector, prepare a USB flash disk before using this utility.

Recovering the BIOS

To recover the BIOS:

1. Turn on the system.
2. Insert the support DVD to the optical drive or the removable device that contains the BIOS file to the USB port or to the floppy disk drive, if supported.
3. The utility displays the following message and automatically checks the DVD or removable device for the BIOS file.

```
Bad BIOS checksum. Starting BIOS recovery...
Checking for CD-ROM...
CD-ROM not found!
Checking for USB Device...
```

When found, the utility reads the BIOS file and starts flashing the corrupted BIOS file.

```
Bad BIOS checksum. Starting BIOS recovery...
Checking for USB Device...
USB Device found.
Reading file "MA78TMLE.ROM". Completed.
Start Erasing...\
```

4. Restart the system after the utility completes the updating process.

- Only the USB flash disk with FAT 32/16 format and single partition can support ASUS CrashFree BIOS 3. The device size should be smaller than 8GB.
- DO NOT shut down or reset the system while updating the BIOS! Doing so can cause system boot failure!

4.2 BIOS setup program

This motherboard supports a programmable Serial Peripheral Interface (SPI) chip that you can update using the provided utility described in section “4.1 Managing and updating your BIOS”.

Use the BIOS Setup program when you are installing a motherboard, reconfiguring your system, or prompted to “Run Setup”. This section explains how to configure your system using this utility.

Even if you are not prompted to use the Setup program, you can change the configuration of your computer in the future. For example, you can enable the security password feature or change the power management settings. This requires you to reconfigure your system using the BIOS Setup program so that the computer can recognize these changes and record them in the CMOS RAM of the SPI chip.

The SPI chip on the motherboard stores the Setup utility. When you start up the computer, the system provides you with the opportunity to run this program. Press <Del> during the Power-On Self-Test (POST) to enter the Setup utility. Otherwise, POST continues with its test routines.

If you wish to enter Setup after POST, reboot the system by doing any of the following procedures:

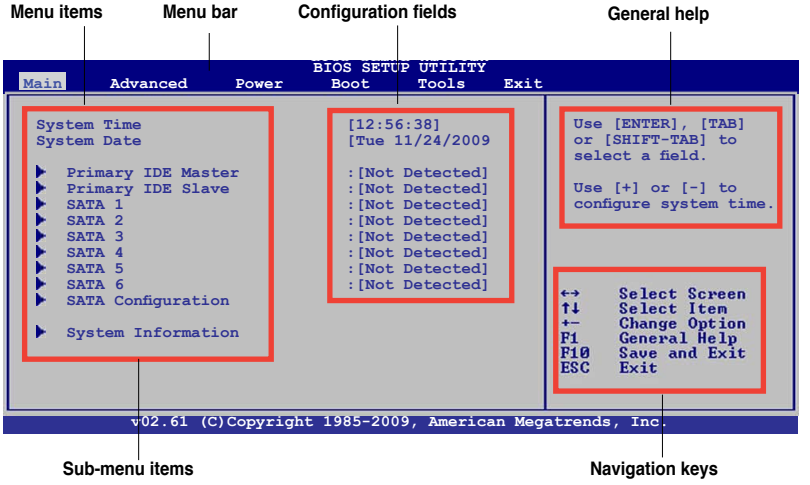
- Restart using the OS standard shut-down procedure.
- Press <Ctrl>+<Alt>+<Del> simultaneously.
- Press the reset button on the system chassis.
- Press the power button to turn the system off then back on.

Using the **power button**, **reset button**, or the **<Ctrl>+<Alt>+<Del>** keys to force reset from a running operating system can cause damage to your data or system. We recommend to always shut-down the system properly from the operating system.

The Setup program is designed to make it as easy to use as possible. Being a menu-driven program, it lets you scroll through the various sub-menus and make your selections from the available options using the navigation keys.

- The default BIOS settings for this motherboard apply for most conditions to ensure optimum performance. If the system becomes unstable after changing any BIOS settings, load the default settings to ensure system compatibility and stability. Select the **Load Default Settings** item under the Exit Menu. See section “4.8 Exit Menu.”
- The BIOS setup screens shown in this section are for reference purposes only, and may not exactly match what you see on your screen.
- Visit the ASUS website (www.asus.com) to download the latest BIOS file for this motherboard.

4.2.1 BIOS menu screen



4.2.2 Menu bar

The menu bar on top of the screen has the following main items:

Main	For changing the basic system configuration
Advanced	For changing the advanced system settings
Power	For changing the advanced power management (APM) configuration
Boot	For changing the system boot configuration
Tools	For configuring options for special functions
Exit	For selecting the exit options and loading default settings

To select an item on the menu bar, press the right or left arrow key on the keyboard until the desired item is highlighted.

4.2.3 Navigation keys

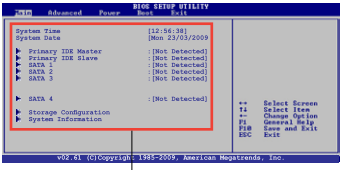
At the bottom right corner of a menu screen are the navigation keys for that particular menu. Use the navigation keys to select items in the menu and change the settings.

Some of the navigation keys differ from one screen to another.

4.2.4 Menu items

The highlighted item on the menu bar displays the specific items for that menu. For example, selecting Main shows the Main menu items.

The other items (Advanced, Power, Boot, Tools, and Exit) on the menu bar have their respective menu items.



Main menu items

4.2.5 Sub-menu items

A solid triangle before each item on any menu screen means that the iteam has a sub-menu. To display the sub-menu, select the item and press <Enter>.

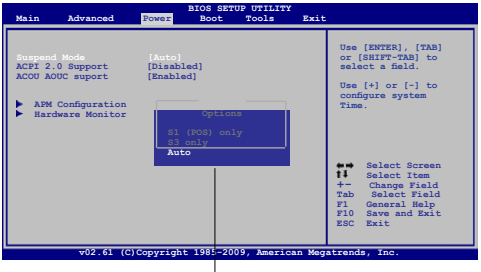
4.2.6 Configuration fields

These fields show the values for the menu items. If an item is user- configurable, you can change the value of the field opposite the item. You cannot select an item that is not user-configurable.

A configurable field is enclosed in brackets, and is highlighted when selected. To change the value of a field, select it then press <Enter> to display a list of options. Refer to "2.2.7 Pop-up window."

4.2.7 Pop-up window

Select a menu item then press <Enter> to display a pop-up window with the configuration options for that item.



Pop-up window

4.2.8 Scroll bar

A scroll bar appears on the right side of a menu screen when there are items that do not fit on the screen. Press the Up/Down arrow keys or <Page Up> /<Page Down> keys to display the other items on the screen.

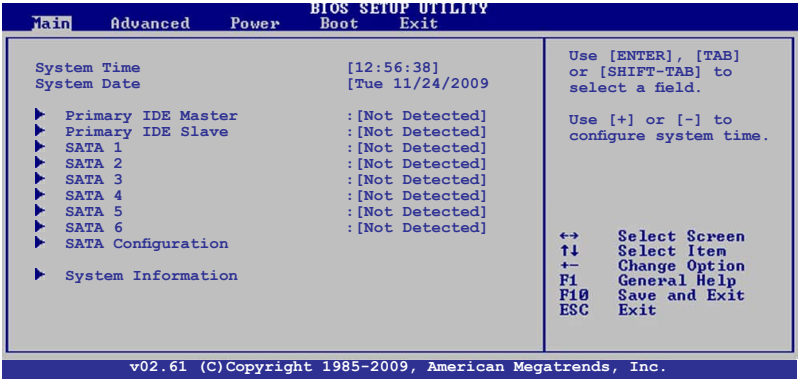
4.2.9 General help

At the top right corner of the menu screen is a brief description of the selected item.

4.3 Main menu

When you enter the BIOS Setup program, the Main menu screen appears, giving you an overview of the basic system information.

Refer to section “4.2.1 BIOS menu screen” for information on the menu screen items and how to navigate through them.


BIOS SETUP UTILITY
Main Advanced Power Boot Exit
System Time [12:56:38]
System Date [Tue 11/24/2009
Primary IDE Master :[Not Detected]
Primary IDE Slave :[Not Detected]
SATA 1 :[Not Detected]
SATA 2 :[Not Detected]
SATA 3 :[Not Detected]
SATA 4 :[Not Detected]
SATA 5 :[Not Detected]
SATA 6 :[Not Detected]
SATA Configuration
System Information
Use [ENTER], [TAB] or [SHIFT-TAB] to select a field.
Use [+] or [-] to configure system time.
↔ Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
v02.61 (C)Copyright 1985-2009, American Megatrends, Inc.

4.3.1 System Time [xx:xx:xx]

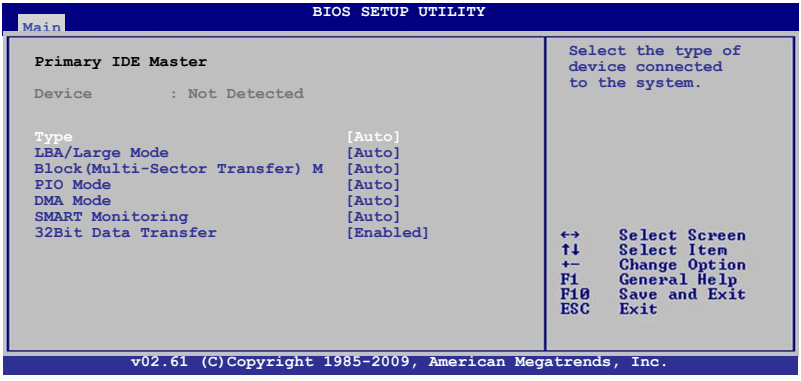
Allows you to set the system time.

4.3.2 System Date [Day xx/xx/xxxx]

Allows you to set the system date.

4.3.3 Primary IDE Master/Slave, SATA1~6

While entering Setup, the BIOS automatically detects the presence of IDE/SATA devices. There is a separate sub-menu for each IDE/SATA device. Select a device item then press <Enter> to display the IDE/SATA device information.



The BIOS automatically detects the values opposite the dimmed items (Device, Vendor, Size, LBA Mode, Block Mode, PIO Mode, Async DMA, Ultra DMA, and SMART monitoring). These values are not user-configurable. These items show Not Detected if no IDE/SATA device is installed in the system.

Type [Auto]

Selects the type of IDE/SATA drive. Setting to Auto allows automatic selection of the appropriate IDE/SATA device type. Select CDROM if you are specifically configuring a CD-ROM drive. Select ARMD (ATAPI Removable Media Device) if your device is either a ZIP, LS-120, or MO drive. Configuration options: [Not Installed] [Auto] [CDROM] [ARMD]

This item appears only when you select the **Primary IDE Master/Slave** and **SATA5/6** devices.

LBA/Large Mode [Auto]

Enables or disables the LBA mode. Setting to Auto enables the LBA mode if the device supports this mode, and if the device was not previously formatted with LBA mode disabled. Configuration options: [Disabled] [Auto]

Block (Multi-sector Transfer) M [Auto]

Enables or disables data multi-sectors transfers. When set to Auto, the data transfer from and to the device occurs multiple sectors at a time if the device supports multi-sector transfer feature. When set to [Disabled], the data transfer from and to the device occurs one sector at a time.
Configuration options: [Disabled] [Auto]

PIO Mode [Auto]

Selects the PIO mode. Configuration options: [Auto] [0] [1] [2] [3] [4]

DMA Mode [Auto]

Selects the DMA mode. Configuration options: [Auto]

SMART Monitoring [Auto]

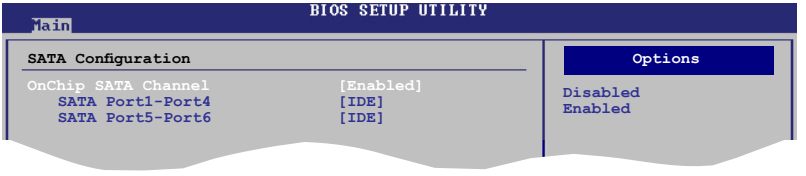
Sets the Smart Monitoring, Analysis, and Reporting Technology.
Configuration options: [Auto] [Disabled] [Enabled]

32Bit Data Transfer [Enabled]

Enables or disables 32-bit data transfer.
Configuration options: [Disabled] [Enabled]

4.3.4 SATA Configuration

The items in this menu allow you to set or change the configurations for the SATA devices installed in the system. Select an item then press <Enter> if you wish to configure the item.



OnChip SATA Channel [Enabled]

Enables or disables the onboard channel SATA port. Configuration options: [Disabled] [Enabled]

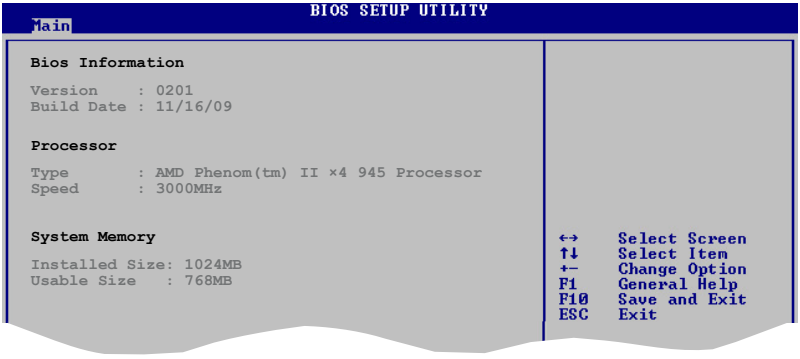
SATA Port1 – Port4 [IDE]
Configures SATA 1/2/3/4. Configuration options: [IDE] [RAID] [AHCI]

SATA Port5 – Port6 [IDE]
Configures SATA 5/6. Configuration options: [IDE] [RAID] [AHCI]

- When SATA 1/2/3/4 are configured as **[IDE]**, SATA 5/6 can only be configured as **[IDE]**.
- When SATA 1/2/3/4/5/6 are configured as **[AHCI]**, only SATA 1/2/3/4 can be detected under OS. Ensure to install the AHCI driver, so that you can use SATA 1/2/3/4/5/6 in AHCI mode under OS.
- When SATA 1/2/3/4 are configured as **[AHCI]** and SATA 5/6 are configured as **[IDE]**, you can access the devices on SATA 5/6 before entering OS.

4.3.5 System Information

This menu gives you an overview of the general system specifications. The BIOS automatically detects the items in this menu.



BIOS Information

Displays the auto-detected BIOS information.

Processor

Displays the auto-detected CPU specification.

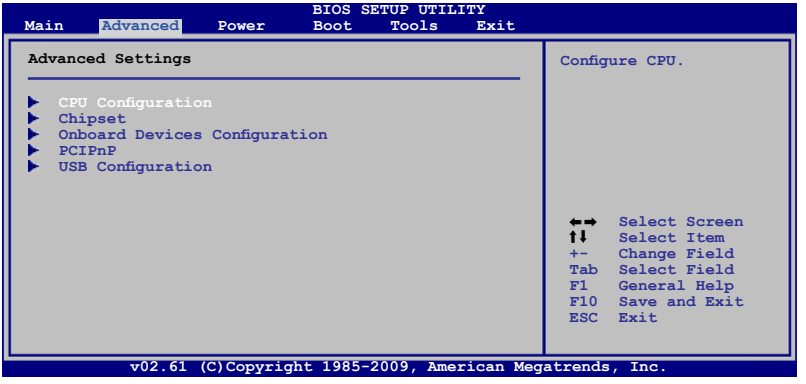
System Memory

Displays the auto-detected system memory.

4.4 Advanced menu

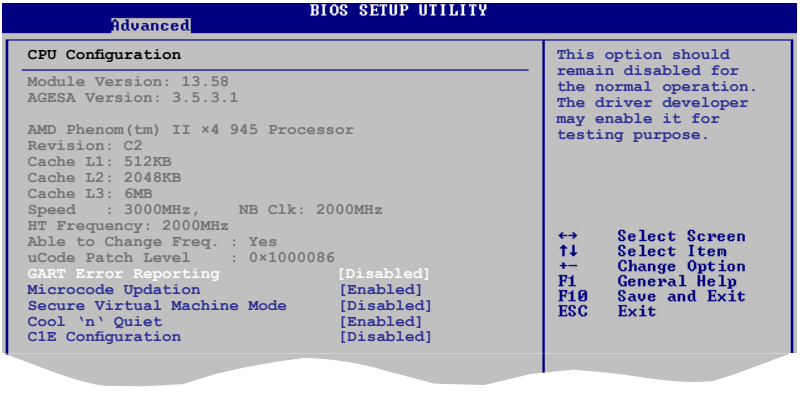
The Advanced menu items allow you to change the settings for the CPU and other system devices.

Take caution when changing the settings of the Advanced menu items. Incorrect field values can cause the system to malfunction.



4.4.1 CPU Configuration

The items in this menu show the CPU-related information that the BIOS automatically detects.



GART Error Reporting [Disabled]

This option should remain disabled for the normal operation. The driver developer may enable it for testing purpose. Configuration options: [Disabled] [Enabled]

Microcode Updation [Enabled]

Enables or disables Microcode Updation. Configuration options: [Disabled] [Enabled]

Secure Virtual Machine Mode [Disabled]

Enables or disables Secure Virtual Machine Mode (SVM). Configuration options: [Disabled] [Enabled]

Cool 'n' Quiet [Enabled]

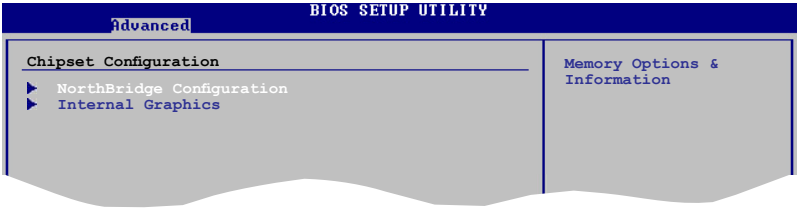
Enables or disables the AMD® Cool 'n' Quiet technology. Configuration options: [Enabled] [Disabled]

C1E Configuration [Disabled]

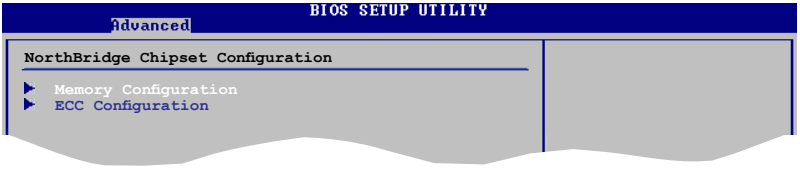
Enables or disables the CPU Enhanced Halt (C1E) function, a CPU power-saving function in system halt state. When this item is enabled, the CPU core frequency and voltage will be reduced during the system halt state to decrease power consumption. Configuration options: [Disabled] [Enabled]

4.4.2 Chipset

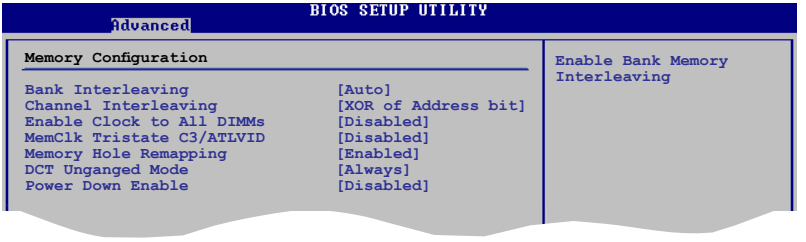
The Chipset menu allows you to change the advanced chipset settings. Select an item then press <Enter> to display the sub-menu.



North Bridge Configuration



Memory Configuration



NorthBridge Configuration

Memory Configuration

Bank Interleaving [Auto]
Allows you to enable the bank memory interleaving. Configuration options: [Disabled] [Auto]

Channel Interleaving [XOR of Address bit]
Allows you to enable the channel memory interleaving. Configuration options: [Disabled] [Address bits 6] [Address bits 12] [XOR of Address bits [20:16, 6]] [XOR of Address bits [20:16, 9]]

Enable Clock to All DIMMs [Disabled]
Enables unused Clocks to DIMMs even though memory slots are not populated. Configuration options: [Disabled] [Enabled]

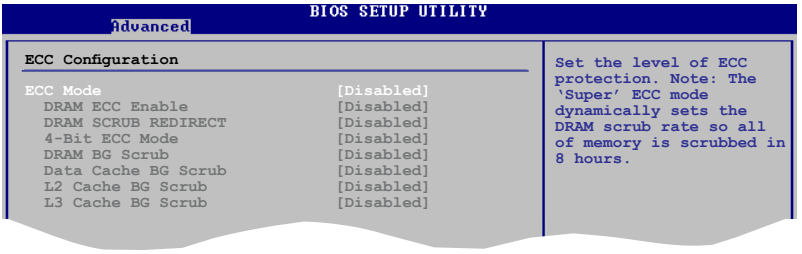
MemClk Tristate C3/ATLVID [Disabled]
Allows you to enable or disable MemClk Tri-Stating during C3 and Alt VID. Configuration options: [Disabled] [Enabled]

Memory Hole Remapping [Enabled]
Allows you to enable or disable memory remapping around memory hole. Configuration options: [Disabled] [Enabled]

DCT Unganged Mode [Always]
Allows you to select the unganged DRAM mode (64-bit width). Configuration options: [Auto] [Always]

Power Down Enable [Disabled]
Allows you to enable or disable DDR power down mode. Configuration options: [Disabled] [Enabled]

ECC Configuration

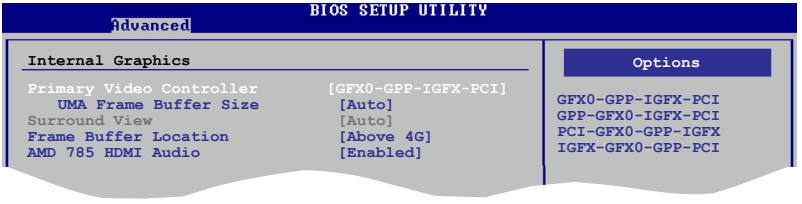

BIOS SETUP UTILITY
Advanced
ECC Configuration
ECC Mode [Disabled]
DRAM ECC Enable [Disabled]
DRAM SCRUB REDIRECT [Disabled]
4-Bit ECC Mode [Disabled]
DRAM BG Scrub [Disabled]
Data Cache BG Scrub [Disabled]
L2 Cache BG Scrub [Disabled]
L3 Cache BG Scrub [Disabled]
Set the level of ECC protection. Note: The 'Super' ECC mode dynamically sets the DRAM scrub rate so all of memory is scrubbed in 8 hours.

ECC Configuration

ECC Mode [Disabled]

Allows you to set the ECC mode. Configuration options: [Disabled] [Basic] [Good] [Super] [Max] [User]

Internal Graphics



Internal Graphics

Primary Video Controller [GFX0-GPP-IGFX-PCI]

Selects the primary display adapter. Configuration options: [GFX0-GPP-IGFX-PCI] [GPP-GFX0-IGFX-PCI] [PCI-GFX0-GPP-IGFX] [IGFX-GFX0-GPP-PCI]

GFX0:primary video controller on a PCIe x16 slot
GPP: primary video controller on a PCIe x1 slot
IGFX: onboard display output port
PCI: primary video controller on a PCI slot

UMA Frame Buffer Size [Auto]

Selects the UMA frame buffer size. Configuration options: [Auto] [32MB] [64MB] [128MB] [256MB] [512MB] [1GB]

- The **[512MB]** option only appears when you install 1GB system memory or more.
- The **[1GB]** option only appears when you install 2GB system memory or more.

Surround View [Auto]

Disables or enables the Surround View function. Configuration options: [Auto] [Disabled] [Enabled]

This item becomes user-configurable when you install an ATI graphics card into the PCIe x16 slot.

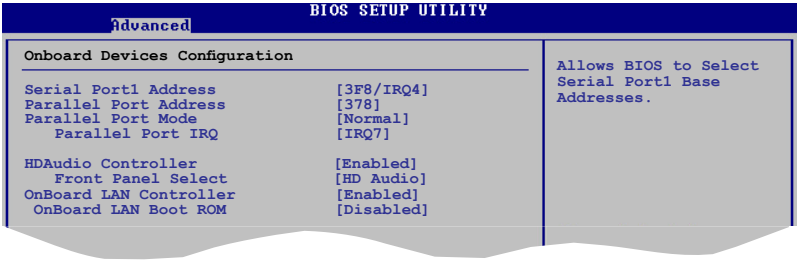
Frame Buffer Location [Above 4G]

Configuration options: [Below 4G] [Above 4G]

AMD 785 HDMI Audio [Enabled]

Disables or enables the AMD 785 HDMI audio. Configuration options: [Disabled] [Enabled]

4.4.3 Onboard Devices Configuration


BIOS SETUP UTILITY
Advanced
Onboard Devices Configuration
Serial Port1 Address [3F8/IRQ4]
Parallel Port Address [378]
Parallel Port Mode [Normal]
Parallel Port IRQ [IRQ7]
HDAudio Controller [Enabled]
Front Panel Select [HD Audio]
OnBoard LAN Controller [Enabled]
OnBoard LAN Boot ROM [Disabled]
Allows BIOS to Select Serial Port1 Base Addresses.

Serial Port1 Address [3F8/IRQ4]

Allows you to select the Serial Port1 base address. Configuration options: [Disabled] [3F8/IRQ4][2F8/IRQ3] [3E8/IRQ4] [2E8/IRQ3]

Parallel Port Address [378]

Allows you to select the Parallel Port base addresses. Configuration options: [Disabled] [378] [278] [3BC]

Parallel Port Mode [Normal]

Allows you to select the Parallel Port mode. Configuration options: [Normal] [EPP] [ECP] [EPP+ECP]

Parallel Port IRQ [IRQ7]

Configuration options: [IRQ5] [IRQ7]

HDAudio Controller [Enabled]

Enables or disables the high definition audio controller. Configuration options: [Enabled] [Disabled]

Front Panel Select [HD Audio]
Configuration options: [HD Audio] [AC97]

OnBoard LAN Controller [Enabled]

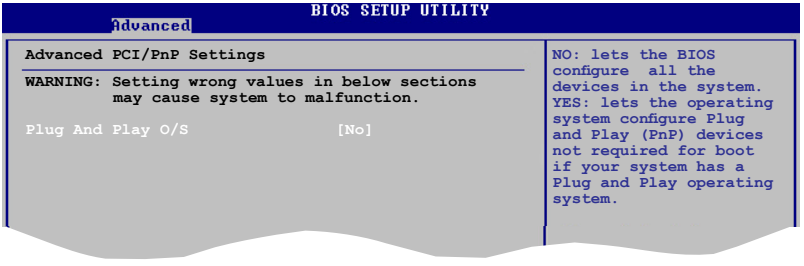
Configuration options: [Enabled] [Disabled]

OnBoard LAN Boot ROM [Disabled]
Configuration options: [Disabled] [Enabled]

4.4.4 PCI PnP

The PCI PnP menu items allow you to change the advanced settings for PCI/PnP devices. The menu includes setting IRQ and DMA channel resources for either PCI/PnP or legacy ISA devices, and setting the memory size block for legacy ISA devices.

Take caution when changing the settings of the PCI PnP menu items. Incorrect field values can cause the system to malfunction.

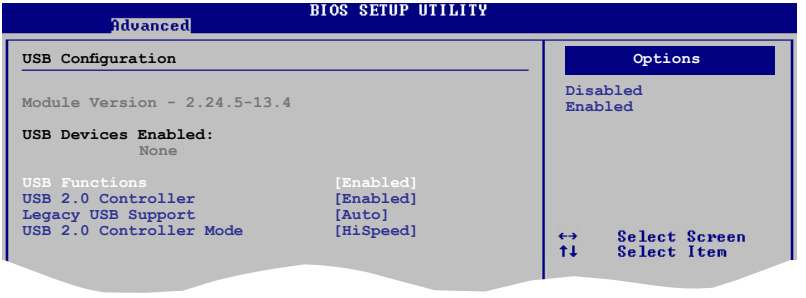

BIOS SETUP UTILITY
Advanced
Advanced PCI/PnP Settings
WARNING: Setting wrong values in below sections may cause system to malfunction.
Plug And Play O/S [No]
NO: lets the BIOS configure all the devices in the system. YES: lets the operating system configure Plug and Play (PnP) devices not required for boot if your system has a Plug and Play operating system.

Plug And Play O/S [No]

When set to [No], BIOS configures all the devices in the system. When set to [Yes] and if you install a Plug and Play operating system, the operating system configures the Plug and Play devices not required for boot.
Configuration options: [No] [Yes]

4.4.5 USB Configuration

The items in this menu allows you to change the USB-related features. Select an item then press <Enter> to display the configuration options.



The Module Version and USB Devices Enabled items show the auto-detected values. If no USB device is detected, the item shows None.

USB Functions [Enabled]

Allows you to enable or disable the USB functions.
Configuration options: [Disabled] [Enabled]

USB 2.0 Controller [Enabled]

Allows you to enable or disable USB 2.0 controller.
Configuration options: [Enabled] [Disabled]

Legacy USB Support [Auto]

Allows you to enable or disable support for USB devices on legacy operating systems (OS). Setting to Auto allows the system to detect the presence of USB devices at startup. If detected, the USB controller legacy mode is enabled. If no USB device is detected, the legacy USB support is disabled.
Configuration options: [Disabled] [Enabled] [Auto]

USB 2.0 Controller Mode [HiSpeed]

Allows you to configure the USB 2.0 controller in HiSpeed (480 Mbps) or Full Speed (12 Mbps). Configuration options: [FullSpeed] [HiSpeed]

The following items may only appear when a USB storage device is plugged.

USB Mass Storage Device Configuration

USB Mass Storage Reset Delay [20 Sec]

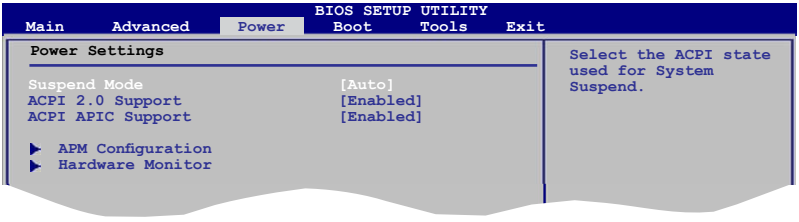
Allows you to set the maximum time that the BIOS waits for the USB storage device to initialize. Configuration options: [10 Sec] [20 Sec] [30 Sec] [40 Sec]

Emulation Type [Auto]

Allows you to set the emulation type. Configuration options: [Auto] [Floppy] [Forced FDD] [Hard Disk] [CDROM]

4.5 Power menu

The Power menu items allow you to change the settings for the Advanced Power Management (APM). Select an item then press <Enter> to display the configuration options.



4.5.1 Suspend Mode [Auto]

Allows you to select the Advanced Configuration and Power Interface (ACPI) state to be used for system suspend. Configuration options: [S1 (POS) Only] [S3 Only] [Auto]

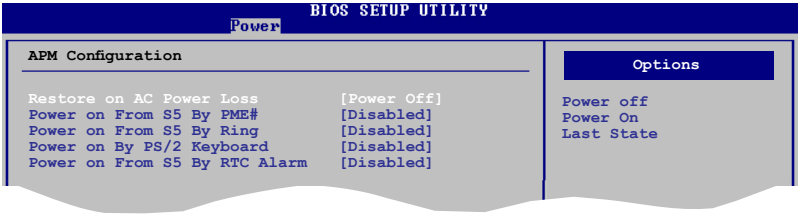
4.5.2 ACPI 2.0 Support [Enabled]

Allows you to add more tables for Advanced Configuration and Power Interface (ACPI) 2.0 specifications. Configuration options: [Disabled] [Enabled]

4.5.3 ACPI APIC Support [Enabled]

Allows you to enable or disable the Advanced Configuration and Power Interface (ACPI) support in the Application-Specific Integrated Circuit (ASIC). When set to Enabled, the ACPI APIC table pointer is included in the RSDT pointer list. Configuration options: [Disabled] [Enabled]

4.5.4 APM Configuration


BIOS SETUP UTILITY
Power
APM Configuration
Restore on AC Power Loss [Power Off]
Power on From S5 By PME# [Disabled]
Power on From S5 By Ring [Disabled]
Power on By PS/2 Keyboard [Disabled]
Power on From S5 By RTC Alarm [Disabled]
Options
Power off
Power On
Last State

Restore on AC Power Loss [Power Off]

When set to [Power Off], the system goes into off state after an AC power loss. When set to [Power On], the system goes on after an AC power loss. When set to [Last State], the system goes into either off or on state, whatever the system state was before the AC power loss.
Configuration options: [Power Off] [Power On] [Last State]

Power on From S5 By PME# [Disabled]

Enables or disables PME wake from sleep states.
Configuration options: [Disabled] [Enabled]

Power on From S5 By Ring [Disabled]

Enables or disables ring to generate a wake event.
Configuration options: [Disabled] [Enabled]

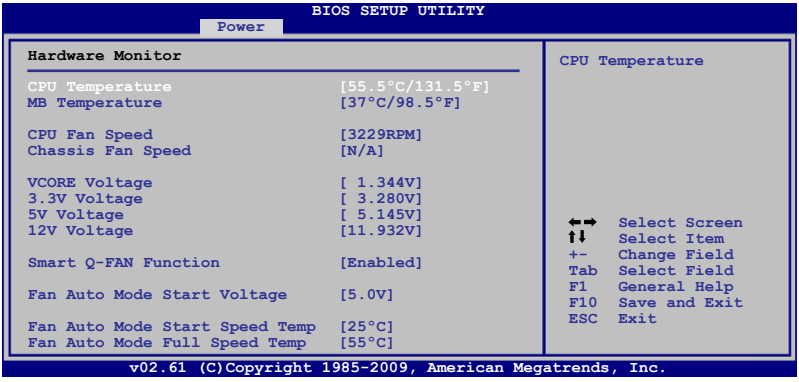
Power on By PS/2 Keyboard [Disabled]

Enables or disables PS/2 Keyboard to generate a wake event.
Configuration options: [Disabled] [Space Bar] [Power Key] [Ctrl-Esc]

Power on From S5 By RTC Alarm [Disabled]

Enables or disables RTC to generate a wake event.
Configuration options: [Disabled] [Enabled]

4.5.5 Hardware Monitor



CPU Temperature [xxx°C/xxx°F] or [Ignored]
MB Temperature [xxx°C/xxx°F] or [Ignored]

The onboard hardware monitor automatically detects and displays the motherboard and CPU temperatures. Select Ignored if you do not wish to display the detected temperatures.

CPU / Chassis Fan Speed [N/A], [xxxxRPM], or [Ignored]

The onboard hardware monitor automatically detects and displays the CPU / Chassis fan speeds in rotations per minute (RPM). If the fan is not connected to the motherboard, the field shows N/A. Select **[gnored]** if you do not want the detected speed to be displayed.

VCORE Voltage, 3.3V Voltage, 5V Voltage, 12V Voltage [xx.xxxV] or [Ignored]

The onboard hardware monitor automatically detects the voltage output through the onboard voltage regulators.

Smart Q-Fan Function [Disabled]

Enables or disables the ASUS Q-Fan feature that smartly adjusts the CPU fan speeds for more efficient system operation. Configuration options: [Disabled] [Enabled]

Fan Auto Mode Start Voltage [5.0V]

Allows you to select the fan auto mode start voltage. Configuration options: [4.0V] [4.5V] [5.0V] [5.5V] [6.0V]

Fan Auto Mode Start Speed Temp [25ºC]

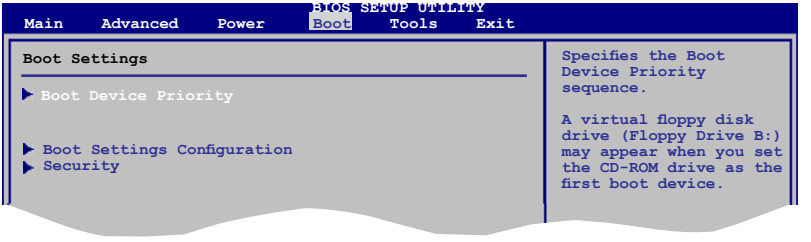
Allows you to set the smart Q-Fan start working temperature. Configuration options: [25ºC] [26ºC] [27ºC] ... [47ºC] [48ºC]

Fan Auto Mode Full Speed Temp [55ºC]

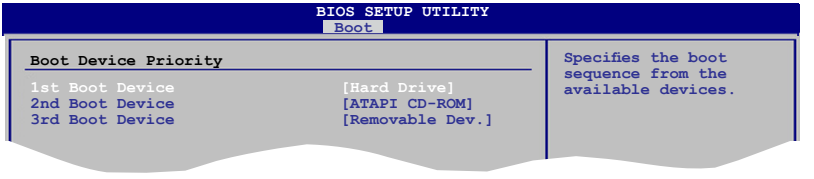
Allows you to set the smart Q-Fan full speed temperature. Configuration options: [51ºC] [52ºC] [53ºC] ... [74ºC] [75ºC]

4.6 Boot menu

The Boot menu items allow you to change the system boot options. Select an item then press <Enter> to display the sub-menu.


BIOS SETUP UTILITY
Main Advanced Power Boot Tools Exit
Boot Settings
Boot Device Priority
Boot Settings Configuration
Security
Specifies the Boot Device Priority sequence.
A virtual floppy disk drive (Floppy Drive B:) may appear when you set the CD-ROM drive as the first boot device.

4.6.1 Boot Device Priority

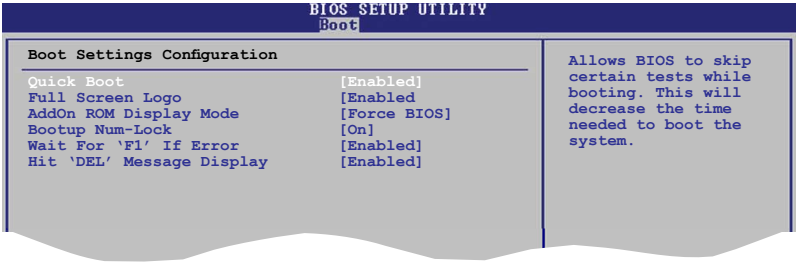

BIOS SETUP UTILITY
Boot
Boot Device Priority
1st Boot Device [Hard Drive]
2nd Boot Device [ATAPI CD-ROM]
3rd Boot Device [Removable Dev.]
Specifies the boot sequence from the available devices.

1st ~ xxth Boot Device [Removable Dev.]

These items specify the boot device priority sequence from the available devices. The number of device items that appears on the screen depends on the number of devices installed in the system. Configuration options: [Removable Device] [Hard Drive] [ATAPI CD-ROM] [Disabled]

- To select the boot device during system startup, press **<F8>** when ASUS logo appears.
- To access Windows OS in Safe Mode, do any of the following:
  - Press **<F5>** when ASUS logo appears.
  - Press **<F8>** after POST.

4.6.2 Boot Settings Configuration


BIOS SETUP UTILITY
Boot
Boot Settings Configuration
Quick Boot [Enabled]
Full Screen Logo [Enabled]
AddOn ROM Display Mode [Force BIOS]
Bootup Num-Lock [On]
Wait For 'F1' If Error [Enabled]
Hit 'DEL' Message Display [Enabled]
Allows BIOS to skip certain tests while booting. This will decrease the time needed to boot the system.

Quick Boot [Enabled]

Enabling this item allows the BIOS to skip some power on self tests (POST) while booting to decrease the time needed to boot the system. When set to [Disabled], BIOS performs all the POST items. Configuration options: [Disabled] [Enabled]

Full Screen Logo [Enabled]

This allows you to enable or disable the full screen logo display feature. Configuration options: [Disabled] [Enabled]

Set this item to [Enabled] to use the ASUS MyLogo2™ feature.

Add On ROM Display Mode [Force BIOS]

Sets the display mode for option ROM. Configuration options: [Force BIOS] [Keep Current]

Bootup Num-Lock [On]

Allows you to select the power-on state for the NumLock. Configuration options: [Off] [On]

Wait for 'F1' If Error [Enabled]

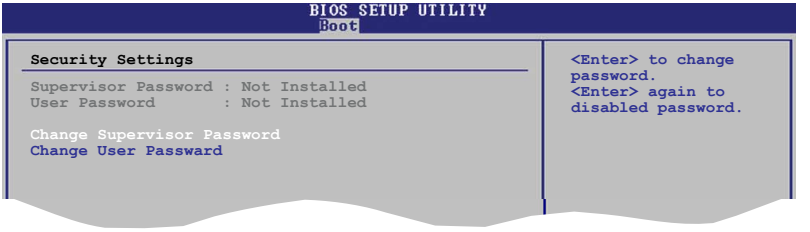
When set to [Enabled], the system waits for the F1 key to be pressed when error occurs. Configuration options: [Disabled] [Enabled]

Hit 'DEL' Message Display [Enabled]

When set to [Enabled], the system displays the message "Press DEL to run Setup" during POST. Configuration options: [Disabled] [Enabled]

4.6.3 Security

The Security menu items allow you to change the system security settings. Select an item then press <Enter> to display the configuration options.



Change Supervisor Password

Select this item to set or change the supervisor password. The Supervisor Password item on top of the screen shows the default Not Installed. After you set a password, this item shows Installed.

To set a Supervisor Password:

1. Select the Change Supervisor Password item and press <Enter>.
2. On the password box, key in a password containing up to six letters or numbers, or both, then press <Enter>.
3. Confirm the password when prompted.

The message “Password Installed” appears after you successfully set your password.

To change the supervisor password, follow the same steps as in setting a user password.

To clear the supervisor password, select the Change Supervisor Password then press <Enter> twice. The message “Password Uninstalled” appears.

If you forget your BIOS password, you can clear it by erasing the CMOS Real Time Clock (RTC) RAM. See section **3.3 Jumpers** for information on how to erase the RTC RAM.

After you have set a supervisor password, the other items appear to allow you to change other security settings.

User Access Level [Full Access]

This item allows you to select the access restriction to the Setup items. Configuration options: [No Access] [View Only] [Limited] [Full Access]

No Access prevents user access to the Setup utility.

View Only allows access but does not allow change to any field.

Limited allows changes only to selected fields, such as Date and Time.

Full Access allows viewing and changing all the fields in the Setup utility.

Change User Password

Select this item to set or change the user password. The User Password item on top of the screen shows the default Not Installed. After you set a password, this item shows Installed.

To set a User Password:

1. Select the Change User Password item and press <Enter>.
2. On the password box, key in a password containing up to six letters or numbers, or both, then press <Enter>. .
3. Confirm the password when prompted.

The message “Password Installed” appears after you set your password successfully.

To change the user password, follow the same steps as in setting a user password.

Clear User Password

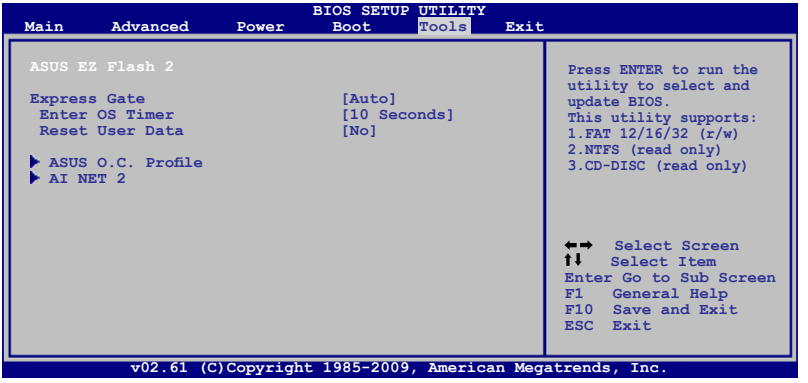
Select this item to clear the user password.

Password Check [Setup]

When set to [Setup], BIOS checks for user password when accessing the Setup utility. When set to [Always], BIOS checks for user password both when accessing Setup and booting the system. Configuration options: [Setup] [Always]

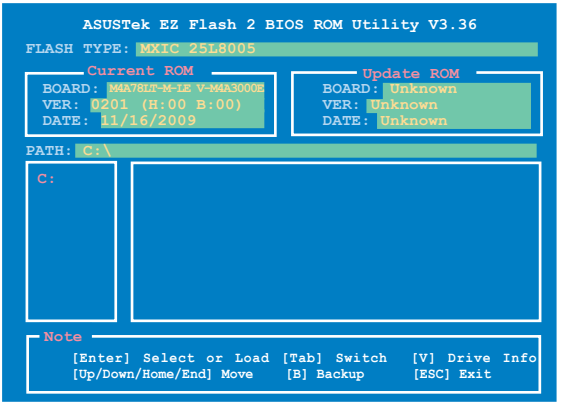
4.7 Tools menu

The Tools menu items allow you to launch special functions. Select an item then press <Enter> to display the sub-menu.



4.7.1 ASUS EZ Flash 2

Allows you to run ASUS EZ Flash 2. When you press <Enter>, a confirmation message appears. Use the left/right arrow key to select between [Yes] or [No], then press <Enter> to confirm your choice.



4.7.2 Express Gate [Auto]

Allows you to enable or disable the ASUS Express Gate feature. ASUS Express Gate is a unique instant-on environment that provides quick access to the Internet and Skype. Configuration options: [Auto] [Enabled] [Disabled]

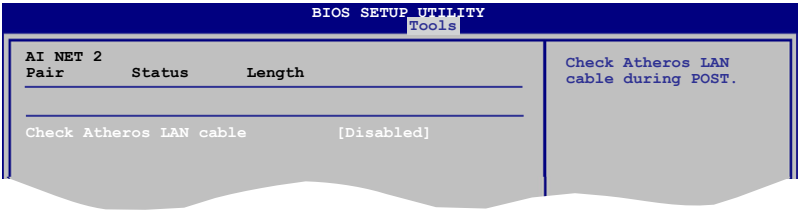
Enter OS Timer [10 Seconds]
Sets countdown duration that the system waits at the Express Gate's first screen before starting Windows or other installed OS. Choose **[Prompt User]** to stay at the first screen of Express Gate for user action. Configuration options: [Prompt User] [1 second] [3 seconds] [5 seconds] [10 seconds] [15 seconds] [20 seconds] [30 seconds]

Reset User Data [No]
Allows you to clear Express Gate's user data. Configuration options: [No] [Reset]

When setting this item to **[Reset]**, ensure to save the setting to the BIOS so that the user data will be cleared the next time you enter the Express Gate. User data includes the Express Gate's settings as well as any personal information stored by the web browser (bookmarks, cookies, browsing history, etc.). This is useful in the rare case where corrupt settings prevent the Express Gate environment from launching properly.

The first time wizard will run again when you enter the Express Gate environment after clearing its settings.

4.7.3 AI NET 2

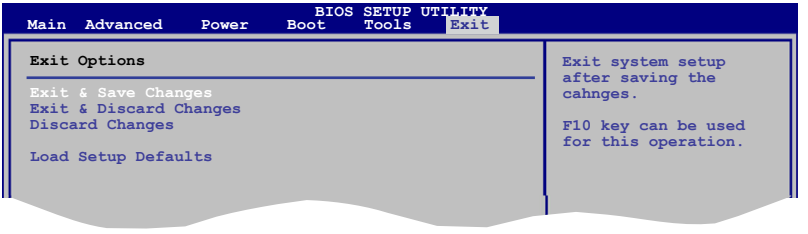


Check Atheros LAN cable [Disabled]

Allows you enable or disable checking Atheros LAN cable during POST. Configuration options: [Disabled] [Enabled]

4.8 Exit menu

The **Exit** menu items allow you to load the optimal or failsafe default values for the BIOS items, and save or discard your changes to the BIOS items.


BIOS SETUP UTILITY
Main Advanced Power Boot Tools Exit
Exit Options
Exit & Save Changes
Exit & Discard Changes
Discard Changes
Load Setup Defaults
Exit system setup after saving the cahnges.
F10 key can be used for this operation.

Pressing **<Esc>** does not immediately exit this menu. Select one of the options from this menu or **<F10>** from the legend bar to exit.

Exit & Save Changes

Once you are finished making your selections, choose this option from the Exit menu to ensure the values you selected are saved to the CMOS RAM. An onboard backup battery sustains the CMOS RAM so it stays on even when the PC is turned off. When you select this option, a confirmation window appears. Select **OK** to save changes and exit.

Exit & Discard Changes

Select this option only if you do not want to save the changes that you made to the Setup program. If you made changes to fields other than System Date, System Time, and Password, the BIOS asks for a confirmation before exiting.

Discard Changes

This option allows you to discard the selections you made and restore the previously saved values. After selecting this option, a confirmation appears. Select **OK** to discard any changes and load the previously saved values.

Load Setup Defaults

This option allows you to load the default values for each of the parameters on the Setup menus. When you select this option or if you press **<F5>**, a confirmation window appears. Select **OK** to load default values. Select **Exit & Save Changes** or make other changes before saving the values to the non-volatile RAM.

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